







Presented by J. J. Brandt  
Army Med. Museum -  
Wash D C

1. Erythema Iris.



4. Urticaria alba. (Porcelain)



3. Common Urticaria.

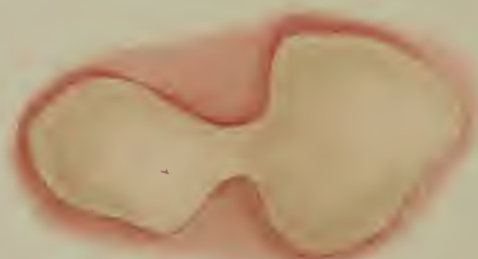


2. Erythema Papulosum.

5. Pemphigus Symplicus.



Bullæ & Crusts



7. Large Bulla



6. Pemphigus in Group 6.

al

A THEORETICAL  
AND  
PRACTICAL TREATISE  
ON THE  
DISEASES OF THE SKIN,

BY  
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PHYSICIAN TO LA CHARITÉ HOSPITAL, MEMBER OF THE ROYAL ACADEMY OF MEDICINE, CONSULTING PHYSICIAN TO THE KING, &c., &c.

FROM THE SECOND EDITION, ENTIRELY REMODELLED.

WITH NOTES AND OTHER ADDITIONS,

BY  
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AND JOINT AUTHOR OF "BELL AND STOKES'S LECTURES ON THE THEORY AND PRACTICE OF PHYSIC."

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# P R E F A C E

## B Y T H E A U T H O R.

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IN this new edition, as in the first, the Diseases of the Skin are classed according to their general pathological characters, and the orders are established on the basis of the method pursued by Willan. Several changes have been made in the distribution of that part of the work which treats of the malformations and alterations in the structure of the skin, of the diseases of the follicles, and of those of the nails and hair.

I have recast the whole of the descriptions, and endeavoured to make them more accurate and more complete than they were before. I have added considerably to the therapeutical considerations, as well by reverting to the facts and cases published before the first edition of this work appeared, as by taking note of all with which science has since been enriched. I have not confined myself to pointing out the therapeutical means whose effects were familiar to me in consequence of having tested them myself, but have signalized a variety of other remedies which have been recommended by different practitioners.

Important additions have been made to the history of several diseases, particularly that of the variolous and vaccinal eruptions, of scabies, of the syphilides or cutaneous eruptions consequent on a venereal taint of the system, of purpura, lupus, cutaneous scrofula, and the inflammations of the skin excited by artificial or accidental means generally. I have also given a more ample account of those diseases of the skin which are peculiar to different countries, and of several diseases of the lower animals susceptible of transmission to the human species.

In a brief historical notice I have referred to the earliest observations extant on each disease discussed, to the series of inquiries which successively rendered its history more complete, and to the best monographies in which these various accounts have been collected, and their sum and substance exhibited in connection.

To conclude, I have thought it well, in a practical work, to support and illustrate general principles by a constant reference to particular instances, which should exhibit the individualities as it were, of the different forms of cutaneous diseases, which should show the application of the various therapeutical measures recommended, or which should make the reader acquainted with forms not yet described, or with rare complications, that could hardly have found a place in a general description: with this view, I have selected and given the details of two hundred cases of every interesting form and variety of affection of the skin, the whole of which were written under my own eye by the pupils successively attached to me as physician to the Hôpital Saint Antoine and the Hôpital de la Charité.

*Paris, March the 8th, 1835.*

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### NOTE BY THE TRANSLATOR.

This English Edition is in all respects similar to the French one. Very little room was found for addition of any kind, and to have retrenched from the text, would have been to do the author injustice. The work is therefore given complete, and little beyond an explanation of the various therapeutical means and formulæ recommended is added in foot notes. The sense of one passage only has been intentionally changed; this stands at the bottom of page 177, and in the original gives us to know that the Eliaats, a nomadic Asiatic tribe, had from time immemorial been in the habit of *inoculating cow-pox, with a view to prevent the attacks of small-pox*,—the suggestion which has made the name of Edward Jenner immortal. The startling assertion, however, comes from the author having misquoted a passage from the Bombay Transactions. On referring to the original, it was found stated that the Eliaats were familiar with *the preservative powers of cow-pox against small-pox*, just as the peasantry of Gloucestershire were. The reading is consequently restored to its proper signification.

R. WILLIS, M.D.

THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST

IN WHICH ARE CONTAINED THE  
MOST IMPORTANT PASSES OF HIS  
MILITARY AND POLITICAL LIFE  
FROM HIS FIRST ASCENSION TO THE  
THRONE TO HIS DEATH  
BY JOHN BURNET  
OF THE SOCIETY OF THE APOSTOLICAL APOSTLES  
IN THE NINETEENTH CENTURY

# P R E F A C E

## TO THE AMERICAN EDITION.

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THE magnitude and copiousness of the great work of M. Rayer on Diseases of the Skin, while precluding the hope of successful rivalry on this side of the Atlantic, would seem, for these very considerations, to render the task of addition and comment comparatively light and easy, and to exonerate him from the charge of presumption who might be persuaded to perform this humble duty. Whether well founded or not, it was under such a belief that the Editor was induced to accede to the wish of the publishers, that he would superintend this first American edition.

Although it so happens, that his contributions have been much more various and extensive than he had at first contemplated, the Editor has constantly endeavoured to adhere closely to the course pursued by the distinguished author himself; in his giving a preference for the practical over the speculative, and in illustrating general principles by particular cases. Free use has been made of the works of Plumbe and Mr. E. Wilson; the more rightfully, as their pages are continually enriched by the observations derived from M. Rayer's volume. Contemporary French authors have not been overlooked; but to the pages of the different Medical Journals, which contain so much valuable matter on the pathology and treatment of many cutaneous diseases, is the Editor under the greatest obligations. From these sources are derived many of his chief additions, as, for example, on variola, vaccinia, syphilida, molluscum and glanders.

The notes of the translator, Dr. Willis, have been retained: they are in small type and accompanied with the initials, R. W. The contributions of the American Editor in the same type with that of the text, are given at the foot of the page, and are always indicated by the letter (*a*) or (*b*), &c. prefixed. In one instance alone, "Outlines of the Pathology and Remedial Treatment of Diseases of the Skin," he has introduced his observations into the body of the work.

The Editor was fain to avail himself of the option kindly allowed him by the publishers, to undertake or decline, as he might deem convenient, the supervision of the engraving and colouring of the plates which give so much interest and value to the present work, and which will constitute, in the eyes of many, its most attractive feature. His existing engagements not allowing him to execute this duty in a manner satisfactory to himself, the services of Dr. Goddard were enlisted by the publishers for the purpose. On him, also, devolved the translation of the letter-press explanations that accompany the plates. The result is such as might have been expected from the well known artistical taste and practised eye of this gentleman; and it is believed, that the coloured engravings in the American edition, which are of the same number and size as in the French and English editions, will bear a scrutinizing comparison with these latter in their style and finish of execution, and exhibit in favourable relief the merits of the Philadelphia artists engaged in the work.





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# INTRODUCTION.

It is long since the study and description of those diseases which appear on the exterior of the body with characteristic symptoms, were detached from general pathology; and it is impossible to deny that the history of these diseases has been more fully and satisfactorily given by the writers who have made them objects of their peculiar consideration. Nevertheless, it must be allowed, that many serious inconveniences would arise from completely abstracting this study from that of the other morbid conditions of the economy. It would, above all, be a grave error to separate certain cutaneous eruptions from lesions of other systems, when both derive their origin from the same cause: to attempt to isolate the venereal eruptions, for example, from the other symptoms of syphilitic infection—exostoses, periostoses, nocturnal pains in the bones and joints, &c., would evidently be arbitrarily to disconnect the different orders of symptoms of one and the same disease. These venereal eruptions have farther so intimate a relationship with the primary symptoms to which they generally succeed, that it even becomes imperative on us to include both under the same general head of investigation.

Certain diseases, such as the *eruptive fevers*, produced by infection of the whole system, although they indeed exhibit themselves on the exterior of the body at determinate periods in peculiar and characteristic symptoms, are, to all intents and purposes, *general diseases*, the effects of which are occasionally felt with far greater violence by other systems, than by the skin. In some cases, indeed, in variola, rubeola, scarlatina, &c., no eruption ever makes its appearance, and the skin then continues entirely a stranger to the effects of the contagion. Who does not know, moreover, that these diseases impress or modify the constitution so deeply, that it generally becomes forever after unsusceptible of being influenced, by the cause which produces them?

In some diseases which are entitled cutaneous, the affection of the skin, so important in a diagnostic point of view when it occurs, is so completely secondary in the question of their nature, that this alteration, which sometimes only shows itself at an advanced stage of the disease, may disappear when the general symptoms acquire greater intensity, and only reappear when these decline; the severity, like the nature of the disease, being linked to morbid conditions of the economy other than those of the skin, as is abundantly evident in purpura, measles, &c.

If in the eruptive fevers and the syphilides, the evidences of a general constitutional affection appear in a multitude of phenomena, the connection of several other alterations of the skin with a particular state of the constitution is no less evident; it is very striking in scrofulous tubercles and ulcers, which are always preceded or accompanied with other symptoms of a strumous nature.

Besides these cases of general infection, and of original or hereditary disposition of the constitution, which are transmitted to the skin, or manifest themselves there in the shape of eruptions of divers forms, the principal phenomena of several morbid states of the system at large, and of certain derangements of important organs, are peculiar affections of the skin. Erysipelas is occasionally seen supervening periodically, every month, or every two months, at the usual menstrual periods, when the catamenia fail or are deficient in quantity; strophulus is one of the most usual morbid phenomena at the time of teeth-

ing; urticaria and lichen *urticatus* frequently succeed derangement of the digestive functions, &c. Outward symptoms of complex morbid states, these eruptions then possess characters very distinct from those that are proper to them, when they arise under other circumstances.

There are very many cases in which, without being able to demonstrate such a thing rigorously, the existence of a connection of the above kind, or of certain relations of various affections of the skin with particular states of the constitution, cannot be called in question. Who is not aware that many of the diseases generally designated as *tettery* in their nature, or as *scall*, such as eczema, lichen, psoriasis, &c., are frequently hereditary, and that they occur among individuals of the same family, even when placed in very different social positions? A point that is not less incontestable is, that it is impossible in an immense number of cases, to ascribe to any outward cause the development or spontaneous disappearance of a great variety of *herpetic* affections; and, when the slowness of their progress, and the frequency of their recurrence, are contrasted with the facility and the promptitude with which artificial or accidental eruptions of almost all kinds are cured, we are naturally led to conclude, that the former are dependent upon peculiar states of the constitution, states which several authors and the vulgar have designated collectively under the title of *tettery*, *scorbutic*, &c.

We should even have a very imperfect notion of the variable nature of certain cutaneous affections, did we not take note of their relations in the chain of cause and effect with a variety of other diseases. There is so intimate a connection betwixt gout and gravel, that the gouty are frequently liable to alternate attacks of these two affections, and when one of them has influenced the constitution deeply, the other is often long of showing itself. Without being either so constant or so striking, alternate attacks of gout, lichen, *agrius*, chronic eczema and psoriasis are still so frequently observed in the upper walks of life, that there does actually appear in some cases to be a kind of consanguinity between these affections despite of the dissimilarity of their appearances.

On the other hand, there is always this wide difference between the diseases, which, to make use of an old expression, *have their roots in the interior*, and the eruptions produced by the action of external stimulants upon the skin, which I have denominated *artificial eruptions*, even when both appear with the same elementary forms, that they always belong to two distinct orders of diseases.

Not only is the nature of the several affections of the skin independent of their external appearances, but every circumstance in these diseases, their beneficial or noxious influence upon the system, their amenableness or rebelliousness to curative means, all, even to their very nature, is modified by different states of the general system,—by the influence of age, the tear and wear of the constitution, &c. The impetiginous eczema of infants, *crusta lactea*, was long ago recognized as an affection which was frequently beneficial rather than injurious to the general health, and one which got well spontaneously, after the lapse of a certain time, without the necessity of having recourse to remedial measures of any kind. Who, on the contrary, is not aware of the fact when an eruption of this kind makes its appearance about the age of puberty, and when the menstrual function is irregular, that cures obtained by every means, often by the use of



agents of the most active description, are frequently followed by speedy relapses, and that recovery is never either complete or attended with beneficial effects, so long as a function of so much consequence in the female economy remains deranged? Almost all the eruptions that appear about the critical age, it matters not what their form may be, are extremely rebellious; considered in the light of supplementary excretions, as they are by some pathologists, or as critical and eliminatory discharges by others, it is always difficult, and occasionally dangerous, to attempt to cure them. The more we study the development and tendency of the greater number of the diseases of the skin which invade independently of any outward appreciable cause, the more we become convinced of their connection with the state of the constitution, and of the necessity there is for considering them under this point of view before we think of undertaking their cure, or even of interfering with them so as to modify their progress.

The field of observation, and the difficulties that surround it, increase in extent and magnitude in relation to the acute diseases upon which certain epidemic constitutions impress a character of mildness or of malignity that proves a remarkable feature, and gives a similarity to the whole of the individual cases; this has been particularly observed in almost all the epidemic variolas, scarlatinas, &c., that have ever prevailed. The principles of prognosis and treatment in such emergencies are rather to be sought for in the histories of analogous epidemics, than in the general descriptions we possess of the disease occurring under ordinary circumstances. In the same way we know that at certain seasons, and during certain medical constitutions the character of an eruptive fever is occasionally so uniform, that the same mode of treatment proves applicable in the plurality of the cases encountered, without much regard being paid to individual peculiarities or conditions. The influence of seasons and prevailing medical constitutions, however, is much less evident than that of epidemic constitutions.

A small number of diseases—cancer and melanosis particularly, when they appear upon the skin, are most commonly the outward manifestation of a diathesis, the effects of which either are already, or speedily will be, felt by one or other of the internal organs; it very rarely happens that the action of these diseases is limited to the point or points of the skin upon which they seem to fasten themselves.

Certain affections of the skin, such as eczema and lichen, are occasionally seen to occur in the course of an internal malady, and their evolution to be followed by a favourable solution of the disease. On the other hand, it is by no means unfrequent to observe the more or less complete disappearance of a variety of cutaneous eruptions, not only on the invasion or during the course of an acute disease, but also on the attack and at any period in the continuance of a chronic affection of an internal organ. It is more particularly between the diseases of the mucous membranes and those of the skin that these *melastases* are observed, which prove prejudicial or salutary, according as the disease is diverted to the interior or exterior of the body. In any case in which these alterations have been observed, the affection of the skin once apparent must not be meddled with; the object of the practitioner must rather be to fix it, to bring it back, in the event of its having disappeared, and afterwards to favour its evolution, in the hope of ultimately guiding it to a fortunate issue.

In a word, every day's observation proves more and more satisfactorily, that the study of the diseases of the skin cannot be detached from that of general pathology, and of the multifarious morbid conditions with which they have such numerous and varied relations. A knowledge of these diseases, in fact, implies familiarity with general infections, hereditary predispositions, the effects of regimen, mode of life, &c.: it concludes acquaintance with the maladies which have preceded them, knowledge of the internal lesions which accompany them, appreciation of the organic changes which follow certain eruptions, prescience of the affections which are apt to supervene on their disappearance, &c. That such general views may acquire practical value, however, that they may be advantageously applied to the treatment of the diseases of the skin, the extent of these relations and influences, striking in some cases, contested or altogether inappreciable in others, requires to be studied and estimated, as much as may be, in the *species* severally and even in the morbid individualities of each

particular case, the whole of the circumstances and every one of the elements being taken into account.

Hippocrates<sup>1</sup> remarked that the same eruptions occurred under two different aspects, according as they existed by themselves, or as they were the *depositories of a morbid state* (ἀποστασεις)<sup>2</sup>. These solutions of disease by the skin<sup>3</sup> he says, are announced by tubercles, tumours, pustules, ulcers, alopecia, &c., in proportion to the rapidity of the development of which is that of the solution itself in any given case. When the solution of the disease does not happen by the formation of tubercles, or ulcers of the skin, or in some other evident way, relapses are frequent and follow rapidly. This relation between cutaneous eruptions and diseases generally, is mentioned in several other passages, in which the father of physic appears rather to enquire into the *significance* of these eruptions, than to describe or study them in themselves.<sup>4</sup> Yet he does consider them elsewhere, under other points of view, namely, those of their nature and treatment,<sup>5</sup> their relations with different ages,<sup>6</sup> and even with the seasons.<sup>7</sup> The strumous affections of childhood, the eruptions that accompany teething, the occurrence of cancer among individuals of mature years, and of prurigo among the aged, had all attracted his observation.

Hippocrates describes erysipelas, and the ill consequences of its retrocession;<sup>8</sup> he mentions phlyctenæ and a great many eruptions, the names of which are still preserved in our medical nomenclature, such as eczema, ethyma, phlyzacia, psudracia; he makes several remarks on the summer hydræa, lepra, psoriasis, lichen, pityriasis,<sup>9</sup> on the pruriginous excoriations of the pudenda,<sup>10</sup> on the varieties of ephelis and their treatment;<sup>11</sup> he describes cancer;<sup>12</sup> he distinguishes different kinds of ulcers;<sup>13</sup> he mentions certain serious gangrenous

<sup>1</sup> Hippocratis Opera, interprete Foësius, in fol. Francfurti, 1621.—*Œconomia Hippocratis*, autore Foësius, in fol. Francfurti, 1588.—I have referred to this edition throughout, it being esteemed one of the most correct. I must remark, however, that in the translation of Foësius, as in all the others, into the Latin tongue, there are many expressions in the nomenclature rendered by words which, in the present day, have a very different signification; lichen, for instance, is translated *impetigo*, *exanthemata* is *pustulæ*, *alpos* is *vitiligo*, &c. To prevent any mistake from this cause, I have frequently placed the Greek word behind the Latin title of the translator.

<sup>2</sup> Impetigines (λεγχῖνες) et lepræ, albicantesque vitilignes (καὶ λευκαὶ) si juvenibus quidem aut pueris horum aliquid contingat aut, sensim se prodens, diuturnitate temporis augetur; in iis quidem, ex pustulæ abscessus esse minime existimandæ sunt, sed morbi. A quibus ex his aliquid subito multumque contingit, id certi abscessus (ἀποστασεις) dici possit. Oriuntur autem albicantes vitilignes ex maximè quidem lethali morbis, velet quæ morbus phæniceus (φαινικῆν) dicitur. Lepræ vero et impetigines ex iis qui ab atrabile fiunt. (Hippocratis Op. *Prædictorum*, lib. ii. p. 114.)

<sup>3</sup> Quinelliam quæ in cutem abscedunt, foras erumpentia tubercula (φύματα): velut putrescentes et purulenti quidam tumores, aut ulcus, aut reliquæ hujusce generis in cute efflorescentes pustulæ (ἐξανθήματα) desquamato, glabrato et capillorum defluvio, vitilignes (ἀλφῖς) scabies (λεπταὶ) alique hujusce modi, quæ, conferto et repentinò quodam confufluxu, non autem dimidiato, et semi repente abscedunt et quæcumque alia dicta sunt, etsi non indigne morbi excretionem respondeant. (Hippocratis, *De morb. vulgaribus*, lib. ii. p. 1002.)

<sup>4</sup> Quæ erumpere et febres decernere nata sunt ulcera ac tubercula, si non affuerint judicationem ipsam tollunt. Quibus vero intro subsistunt certissimas et celerissimas morborum recidivas afferunt. (De morb. vulgaribus, lib. ii. p. 1009.)—Lepra, prurigo, scabies (ψώρα), impetigines (λεγχῖνες), vitiligo (ἀλφῖς), et alopecia ex pituita oriuntur. Sunt autem ista fæditas potius quam morbi; favus (κνήσιν), struma; phygethia, furunculi et carbunculus, ex pituita oriuntur (De affectionibus, p. 525).—Quibus per febres assiduas pustulæ (φλύζα) toto corpore enascuntur, lethale est nisi quid purulentum abscedat. In his verò præcipuò adnasci ad aures tubercula solent (Coacæ prænotiones, p. 133).—Quibus ad articulos prærubræ pustulæ superficiales enatæ sunt, ac subinde rigent iis, velut ex acceptis plagis cum dolore venter et inguina rubescunt, et pereunt (Coacæ prænot., p. 195).—Pustularum eruptiones (ἐξανθήματα) velut summa cute leviter lacerata aut vellicata, totius habitus tabem et corruptionem denuntiant (Coacæ prænot., p. 189).—Eos (dolores) juvari spes est, si abscessus aliquis eruperit, aut pustulæ toto corpore pullularint. (Prædictorum, lib. ii. p. 109.)

<sup>5</sup> Cum fauces ægrotant, aut tubercula in corpore exoriuntur, excretiones in considerationem adhibendæ. Si namque biliosæ sint, corpus simul ægrotat. At si saniorum similes exiierint, secure corpus nutrias. (Aphorism., sect. ii.—aph. 15. sec. vii. lib. ii. p. 1244.)

<sup>6</sup> Prædictorum, lib. ii. p. 95.—Aphorism., sect. iii. aph. 31.

<sup>7</sup> Vere, lepræ, impetigines, vitilignes et pustulæ ulcerosæ plurimæ, et tubercula, et articulorum dolores (Aphorismi, lib. iii. sect. vii.—aph. sect. iii. aph. 20, p. 1243.)—Estate, et oris exulcerationes, genit alium putredines et sudamina. (Aph. sect. iii. aph. 21, p. 1243.)—Hyeme, viris—Pustulæ multæ nocturnæ, epinyctides dictæ. (De acre, locis et aquis, p. 281.)

<sup>8</sup> Prædictorum, lib. ii. p. 45.—Aphorismi, sect. vi. aph. 25.

<sup>9</sup> Prædictorum, lib. ii. p. 109.

<sup>10</sup> Si ulcera in pudendis innascantur, et pruritus corripial, oleæ, hederæ, rubi, et mali punici dulcis folia irita, vino veteri macerato, deinde carnem recentem foliis obduciam in subditio opposito, et per noctem teneat. (De nat. muliebri, 582.)

<sup>11</sup> De morbis mulierum, lib. ii. p. 667.

<sup>12</sup> De morbis mulierum, lib. ii. p. 648.

<sup>13</sup> At verò ulcera quatuor progrediendi modos mihi habere videntur. Unum quidem in profundum, cujusmodi sunt fistulosa, cicatrice obducta, et intus cava. Alterum quo



affections under the title of *Nomæ*,<sup>1</sup> lastly, he speaks of an epidemic fever<sup>2</sup> in which an eruption (*ἀθραξες*) similar to that produced by burns, was observed, a disease which has been regarded as small-pox by some commentators, and with more reason by others as a *bullous fever*.

Several particular cases in the Hippocratic collection, are remarkable either from inculcating the doctrine of *desposits* (*ἀπόσπασις*) or from the vigour and variety of the descriptions; such is the case of a wet nurse, the whole of whose body became covered with *ecthymata* when she gave over nursing;<sup>3</sup> such is that of Silene, labouring under severe fever, whose body became covered on the eighth day with *red spots*, and who died on the eleventh;<sup>4</sup> such is that of Thasus, who was attacked with a gangrenous affection of the foot, &c.<sup>5</sup>

Celsus<sup>6</sup> does not, like Hippocrates, study the cutaneous eruptions with reference to their origin and the crises they consummate. He remarks, however, that phlegmon sometimes appears after fever, that certain eruptions occur during the spring and summer seasons, and that others are most frequent among children, but he dwells little upon these relations. On the other hand, the ideas he conveys to us of these diseases are in general much more complete than those of Hippocrates; his description of furunculus, and hordeolum, of the callous ulcer, of chilblains, of erysipelas, especially the gangrenous species of the disease, of circumscribed lichen (first species of *papulæ*), of lichen *agryus* (second species of *papulæ*), of sycosis, psoriasis (third species of *impetigo*), of psoriasis *guttata*, and especially of Greek elephantiasis, cancer, malignant pustule (*carbunculus*), and a variety of diseases of the organs of generation and of the matrices of the nails, are not only remarkable for their accuracy, but farther for the excellent therapeutical precepts with which they are conjoined. Celsus farther describes various kinds of alopecia (*area ophiasis*) and sundry diseases of the hairy scalp (porrigo, cerion); it is more difficult to fix upon the precise diseases he mentions under the name of *ignis sacer*, *epinyctis*, *scabies*, *impetigo* of different kinds, &c.

Pliny<sup>7</sup> describes no disease particularly, but he mentions a host of simple and compound medicines for the cure of all that were known, those of the skin among the number. His nomenclature is the same as that of the Greek physicians. He gives the names of several eruptions of which Celsus makes no mention, of the lichen of children, of the prurigo of the aged, of prurigo *puerili*, of *furfures faciei*, &c. He also names several diseases which were new, or confined to certain countries, the contagious mentagra, and the gemursa of Italy, the carbunculus (anthracion) peculiar to Gallia Narbonnensis, and elephantiasis very common in Egypt. This writer also makes mention of several very active medicines against diseases of the skin, such as cantharides and elaterium internally, as well as the external use of vinegar, lime and alum. He even speaks of baths of the mineral waters, as often employed successfully in the treatment of ulcers and several other affections of the skin. (De differentia aquarum, medicinis, et observationibus.)

Galen<sup>8</sup> gives the details of several cases of herpes and elephantiasis; he has a long list of remedies against erysipelas, lichen, varus,

ad superiora tendunt, velutque super excrescentem carnem habent. Tertium in latum, qualia quæ serpentina dicunt. Quartus modus est, qui solus secundum naturam motus videtur. (De medico liber, p. 21.)—(De ulceribus, p. 869.)

<sup>1</sup> Nomæ verò maximæ sunt lethales, quæ putredines altissimè descendentes habent, suntque nigerrimæ et siccissimæ. Vitiosæ quoque et in periculum præcipitant, quæ saniem nigram reddunt. (Prædictor, lib. ii. p. 98.)

<sup>2</sup> Cranone carbunculi ætate grassabantur. Per magnos æstus affatim et continenter compluit, idque ab Austro magis. Sanies quidem plurima cuti subnascebatur, quæ intro conclusa dum incalesceret, pruriginem excitabat. Deinde verò in pustulas erumpebat iis affines, quæ in ambustis fieri solent. Tantus inerat sub cute ardoris sensus, ut uri viderentur. (De morb. vulg., lib. ii. p. 994.)

Aristophontis filiam febris tertio et quinto die prehendit, sicca plurimum permansit, alvus tamen huic conturbata est, difficilis judicatio fuit, supra triginta dies cessavit. Pustulæ, (*φλύκταιναι*) quidem ex laboribus non vehementibus, ad diem septimam perveniunt, aliquantulum lividæ (De morb. vulg., lib. iv. p. 1329.)

<sup>3</sup> Lactanti pustulæ (*ἐκθύματα*) per totum corpus eruperunt, quæ ad ætatem conserderunt, ubi lactare desiisset (De morb. vulg., lib. ii. p. 1013.)

<sup>4</sup> Octavo sudor frigidus per omnia membra diffusus est, cum pustulis (*ἐξanthύματα*) rubentibus, rotundis, parvis, varis non absimilibus, quæ permanebant neque abscesum faciebant (De morb. vulg., lib. i. p. 970.)

<sup>5</sup> De morb. vulg., p. 985.

<sup>6</sup> Celsus. De re medica. Ed. Fouquier et Ratier, 12mo. Paris, 1823.

<sup>7</sup> Plinii secundii. Historiæ mundi, lib. xxxvii. Venet. 1569.

<sup>8</sup> Galeni Opera, folio. Basilæ, 1562.—Novus index in omnia quæ extant Galeni opera. fol. Basilæ, 1562.

sycosis, &c.<sup>9</sup> But his theory of the humours constantly renders his descriptions obscure, and leads him away into numerous digressions. defects which the precision and purity of the painting of Celsus render still more striking. Although he studied sweating and the other critical phenomena particularly, and observes that ulcers of the skin are frequently an indication of a bad state of the constitution,<sup>10</sup> Galen does not insist to the same extent as Hippocrates, on the relation between cutaneous eruptions, and the solutions and the *ἀπόσπασις* of diseases.

The distinction of the cutaneous diseases into those which attack the *skin of the whole body*, and those which are confined to the *head* or to a few regions, is expressly mentioned by Galen in his *Isagoge*,<sup>11</sup> where he also notices the connection of several of these affections with gout and rheumatism. Under the title of *ἀχῆρ* and of *πυρίον* (*favus* of the Latin writers)<sup>12</sup> he clearly indicates the *humid eczema* of the scalp (*tinea mucosa*), and acute impetigo of the same part (*porrigo favosa* Willan).

Cælius Aurelianus<sup>13</sup> has left a number of details on the treatment of phthiriasis and elephantiasis, of which Aretæus presents us with a picture that is both more complete and more animated.<sup>14</sup>

Ætius<sup>15</sup> treats of several diseases of the skin after Archigenes, and of the affections of the genital parts after Leonidas. He describes with particular care a number of diseases of the skin, to which infants at the breast are liable, and he gives good precepts in regard to milk diet, on the use of baths, on that of cold water, on ablation in fever, and a great variety of other therapeutic means. Scribonius Largus<sup>16</sup> gives the characters of *zona*, which had already been mentioned by Pliny.

Alexander Trallianus<sup>17</sup> merely repeats the observations of the Greek medical writers, on the external diseases of the head.

Paulus Ægineta distinguishes lepra from psoriasis, and gives an excellent description of onychia maligna, under the name of *pterygion*. He recommends us not to interfere with the eruptions of infancy save in their decline, and dwells upon the influence of regimen, and of the milk of the nurse.<sup>18</sup>

The Arabian writers<sup>19</sup> have not only reproduced the observations of Hippocrates, Galen, Rufus Ephesius, Oribasius, Paulus Ægineta, &c., on the diseases of the skin, but were the first who described variola, rubeola and the elephantiasis, since entitled from them, *of the Arabians*. Avicenna<sup>20</sup> has given a particularly good account of anthracion and

<sup>9</sup> Galeni Opera, u.s. De compositione pharmacorum, secundum locos. Cl. v. p. 323.

<sup>10</sup> Magna tamen ex parte cutis, quoniam in hanc excrementa, quæ in habitum corporis colliguntur, natura expellit, multis et assiduus ulceribus afficitur quippe cancri, phagedænæ, herpes erodentes, carbunculi, et quæ Chironia et Telephæa vocantur, milleque aliæ ulcerum generationes ab ejusmodi cacoehymia nascuntur. (De temperamentis, lib. iii. Cl. i. p. 45.)

<sup>11</sup> Cutem totiusque corporis partes exagitant lepra, psora, alphas albus, alphas niger, leuce, impetigo simplex, impetigo agrestis, dracontiasis, achrocordones, thymi, myrmecia, clavi calli. Quædam horum ex podagrâ et articulari morbo, quædam ex sese oriuntur....Achores, pityriasis, meliceres, atheroma, et favus. Porro eam partem, quæ capillo tegitur, et mentum occupant, alopecia, ophiasis, calvities, et madarotes. Pili omnes fluunt, extenuantur, quassantur, scinduntur, squalescunt, in pulverem rediguntur, subflavescent, canescunt. (De exterioribus capitis affectionibus. Introductio seu medicus, 117.)

<sup>12</sup> Ἀχῆρ, id est manantia ulcera, cutis capitis vitium sunt, ab ipso sic dicta affectu, quodd cutem tenuissimis foraminibus perforant, ex quibus glutinosa effluit sanies. Huic vitio affine est, quod πυρίον dicunt Græci (nos favum), in quo foramina sunt, quam in illis majora, melleum continentia humorem. (Galenus De remediis paratu facilibus. —7. Classis, t. iii. p. 300.) Aetius (Tetrabibl. cap. 68, lib. ii.) describes impetigo of the scalp under the name of *μελιχρῆς*. M. Alibert has described that of the face under the name of *melitagre*.

<sup>13</sup> Cælius Aurelianus. De morbis acutis et chronicis, 4to. Amstelodami, 1755.

<sup>14</sup> Aretæus. De causis et signis acutorum, et diuturnorum morborum, folio. Lugd. Batav., 1735, p. 67.

<sup>15</sup> Aetii Amideni contractæ ex veteribus medicinarum tetrabiblos, hoc est xvi. sermones. Basil., 1542 folio.

<sup>16</sup> Scribonius largus. De compositione medicamentorum.

<sup>17</sup> Alexandri (Tralliani) libri duodecim, græce et latine, multo quam antea aucti ores et integriores. Basil., 1594, 8vo.

<sup>18</sup> Pustulis quæ puero per cutem erumpunt, primum sanè nullum facessere negotium oportet; ubi verò probe decreverint, tunc jam curare tentabimus balneis....optimum verò est nutricem dulciori victu uti. (Pauli Æginetæ Opus de re medica. Lib. i. p. 7. Parisiis, 1532.)

<sup>19</sup> Rhazes. In medicinali disciplina, ch. xxvi. fol. Venitiis, 1542.

<sup>20</sup> Avicenna (In res medicas omnes, &c.) (Venetiis, fol. 1564. lib. iv. fen. i. tract. vi. p. 71, 72 et 73) has well distinguished rubeola from variola: "Variola vero in principio apparitionis est eminentia et altitudo; et morbillus est minor variolis et minus accedet oculo quam variola....Lacrymæ in eo sunt plures...et dolor dorsi minor."



pestilential carbuncle (de pruna et igni persico); his description *de vesicis et inflationibus* appears applicable to pemphigus and rupia, and that *de essera* to urticaria; his *safali* corresponds with our impetiginous eczema of the head and other regions of the body, and his *bothor levis* to rosacea.<sup>1</sup> Avicenna appears farther to have distinguished between scabies and prurigo.<sup>2</sup> Avenzoar speaks of the *acarus scabiei*.<sup>3</sup>

The Arabian physicians, great advocates for blood-letting, have also enriched the *Materia Medica* with a variety of new medicines, and advanced therapeutics by their novel applications of many of those that were already known. They studied the action of baths, particularly of the sulphureous mineral waters, in diseases of the skin.

The writers who come next in order after the Arabian physicians, have left us ample details with regard to the two most remarkable epidemics, that have ever occurred whether the extent of their ravages or the length of time during which they continued be considered. Theodorici<sup>4</sup> and Gilbertus Anglicus<sup>5</sup> were the first who described the *lepra* of the middle ages; Torella,<sup>6</sup> Manardus,<sup>7</sup> Massa,<sup>8</sup> Fracastorius,<sup>9</sup> and many others, make us acquainted with the various forms of *syphilis*.

On occasion of these two memorable epidemics, and with a view the better to fix their characters, Aquilanus,<sup>10</sup> Leoniceus,<sup>11</sup> and some other writers quoted in the *Aphrodisiacus* of Luisinus, such as Montesaurus, Scanaroli and Cataneo, gave more attention than had yet been done to a comparative study of the descriptions of *lepra*, elephantiasis, alphas and leuce, left by the Greek writers, and of elephantiasis and several other diseases of the skin, handed down by the Arabians. These authors remind us of the fact that the translators of Rhazes and Avicenna make use of the word *lepra* to designate the disease entitled elephantiasis by the Greeks; that the *lepra* of the Greeks was a squamous disease, and that the elephantiasis of the Arabians is distinct from both the *lepra* and elephantiasis of the Greeks.

One of the most celebrated surgeons of the period when letters and the sciences began to revive, Guido de Gauliac or Guy de Chauliac,<sup>12</sup> distinguished five species of *tinea*, which correspond exactly with impetigo, eczema, sycosis and favus of the scalp; he characterizes anthracion perfectly, and is the first who speaks of the contagion of scabies.

Vidus Vidius or Guido<sup>13</sup> mentions the vesicular varicella or chicken pox.

Fracastorius, in his treatise *de morbis contagiosis*,<sup>14</sup> endeavours to determine which of the diseases of the skin were contagious, and which were not; he has also distinguished very accurately between *anthrax*, *phyma* and proper *carbuncle* [anthracion?].

Fernelius<sup>15</sup> describes lentigo, and the redness of the skin, the pustules and indurations or tubercles of rosacea; he also gives a particular account of sundry forms of syphilitic eruption; he indicates purpura, or at least spontaneous ecchymosis of the skin; he unites into a single group *impetigo*, the whole of the papular and squamous eruptions, and describes eczema of the scalp under the name of *tinea*.

Forestus,<sup>16</sup> a learned observer, has published a number of particular

cases, among which there occurs one of pemphigus *infantil*, one of contagious scabies, which he distinguishes from a variety of other diseases, all alike designated in his time by the title of scabies, one of psoriasis palmaris, one of *lepra vulgaris*, &c. These cases are accompanied with scholia, in which Forestus examines and discusses the observations of preceding writers relative to cases of a corresponding description.

Schenkii,<sup>17</sup> a laborious and erudite compiler, has brought together a great number of cases of alterations of the hair, of congenital and accidental horny productions, of diseases of the hairy scalp, of sycosis or mentagra, of lichen, &c.

Sennertus<sup>18</sup> describes many of the changes in colour which the skin undergoes, particularly those which are entitled liver-spots (chloasma); as also fetid ephidroses of the feet, axillæ and body at large. He gives a detailed account of the diseases of the hair-follicles and of plica, after Starnigel and other observers.

Ballonius or Baillou<sup>19</sup> revives and comments upon the Hippocratic doctrine of the diseases of the skin, considered now as existing *per seipsis*, now as *ἀνοστασις* or *depositories* or *emunctories*, and again as *vitia loci*.

The essays of Joubertus<sup>20</sup> and Compolongo<sup>21</sup> scarcely deserve to be mentioned.

Mercurialis<sup>22</sup> introduced into his descriptions the observations of the writers who preceded him. Like Galen, he divided the special diseases of the skin into two sections: as they were *peculiar* to the head, or as they were liable to appear on *all parts of the body*. The latter he subdivided into two special groups: as they altered, first, the *colour* of the skin (leuce, alphas, &c.); secondly, as they rendered its surface rough and uneven (impetigo or lichen, pruritus, scabies, or psora, *lepra*), to which he added a variety of tumours, without, however, condescending on the description of any. Under the name of *tinea* he gives the characteristic symptoms of favus (*tinca favosa*; porrigio *lupinosa* Willan) with great clearness,—its bright yellow and dry crusts, its transmission by contagion, and its influence in causing the loss of the hair. He detaches completely and with justice, the disease from *achores* and *favi*, [impetiginous eczema, and impetigo?] the influence of which upon the constitution and anterior diseases, he carefully notes.

Joannes Riolanus,<sup>23</sup> after alluding to this division of Mercurialis, proposes another of his own, based upon the appearances presented by the diseases of the skin, without regard to their seat. The diseases of the skin, says he, may be divided, first, into *pustules* (prurigo, scabies, psora, *lepra*, impetigo, psudracia, ambustio); secondly, into *deformities* (maculæ, morbid discolorations, loss of the hair, phthiriasis); thirdly, into *tubercles* (warts, excrescences, condylomata.)

Hafenreffer<sup>24</sup> describes the diseases of the skin very briefly, and often after the ancient or cotemporary authors, without appearing to have been guided by any general views in their distribution. He includes variola, rubeola, the venereal eruptions, and the primary symptoms of syphilis in the study of the diseases of the skin. There is, in fact, nothing remarkable in his work, especially in comparison with that of Mercurialis, beyond his description of the syphilides or syphilitic eruptions, of dysenteric variolæ, and his history of the *pediculi* of the human body, of which he reckons four species, one of which evidently corresponds to the *acarus scabiei*. He farther attempts to construct a *table of synonyms*, in which the Greek, Latin, Arabian, and German names of the diseases of the skin are included; but, he has here committed a considerable number of errors, and has frequently assimilated

<sup>1</sup> Sparguntur super nasum et super poma maxillarum *bothor* (pustulæ) albæ, quasi ipsa sint puncta lactis.

<sup>2</sup> Et scabies quidem differt a pruritu in hoc quod cum pruritu non sunt *bothor* (pustulæ) sicut sunt in scabie....et pruritus quidem senilis parum obedit curationi.

<sup>3</sup> Avenzoar. De rectificatione et facilitatione medicationis et regiminis. Venetiis, fol. 1549.

<sup>4</sup> Theodorici Chirurgia secundum medicationem Hugonis de lue venerea, 1519, folio.

<sup>5</sup> Gilbertus. Laurea anglicana seu compendium totius medicinæ. Lugdon, 4to. 1510.

<sup>6</sup> Torellæ De pudendagra tractatus. Consilia quædam, etc. Aphrodisiacus, p. 491, fol. Lugduni Batavorum, 1728.

<sup>7</sup> Manardi Medicinales epistolæ, etc. Ferraræ, 4to. 1521.

<sup>8</sup> Massa. De morbo gallico. Aphrodisiacus, p. 39.

<sup>9</sup> Fracastorius. Syphilis, sive de morbo gallico Libri tres. Veronæ, 1535, 4to.

<sup>10</sup> Aquilanus (Sebastianus). De morbo gallico. Aphrodisiacus, p. 1.

<sup>11</sup> Leoniceus. De epidemia quam Itali morbum gallicum vocant.—Aphrodisiacus, p. 17.

<sup>12</sup> Guy de Chauliac. Chirurgiæ tractatus, folio, 1570.

<sup>13</sup> Vidus Vidius. Ars univers. medicinæ, t. ii. cap. vi. De variolis et morbilis.

<sup>14</sup> Fracastor. De morbis contagiosis, lib. ii. cap. xv.; de distinctione infectionum cutaneorum.—*Ibid.* Phyma verò furunculo simile penè est; sed planius est, et rotundius, vulgus improprie Carbonem vocat, multum differens ab eo, qui proprie Carbunculus dicitur.

<sup>15</sup> Ferneli Universa medicina, fol. Colonia Allobrogum, 1679.

<sup>16</sup> Forestus (P.) Observationum et curat. medic. etc.—De exterioribus vitii capitis, de maculis faciei, de pruritu ani, de phlyctænis.

<sup>17</sup> Schenkii Observat. medic. rarior., libri vii. fol. Lugduni, 1694.

<sup>18</sup> Sennerti Opera, t. iii. lib. v. pars tertia. De cutis, capillorum et unguum vitiiis. Parisiis, 1631, fol.

<sup>19</sup> Ballonii (Guil.) Opera omnia. Epidem. et Ephemer., lib. i. l. i. p. 49, 4to. Geneva, 1762.

<sup>20</sup> Joubertus (Laurent). De affectibus pilorum et cutis, 12mo. Geneva, 1572.

<sup>21</sup> Compolongo (Emil). De morbis cutaneis, lib. iv. tract. iii. Parisiis, 1634.

<sup>22</sup> Accardius (Paulus) Tractationem de morbis cutaneis et omnibus humani corporis excrementis ex ore Hieronymi Mercurialis exceptit et in quinque libros digessit ac edidit. Venetiis, 1572, 4to. Basil, 1756, 8vo. Venetiis, 1601, folio. *Ibid.*, 1625, 4to. See also the book of Mercurialis: De decoratione, in which he treats of the diseases of the nails, and of several other affections of the skin.

<sup>23</sup> Riolani (Joannis) Opera Omnia. De morbis cutaneis, p. 547, fol. 1610.

<sup>24</sup> Hafenreffer (Samuel). *παραβολὴ ἀνοστήσεων* in quo cutis eique adherentium partium affectus etc., traduntur. 12mo. Tubingæ, 1630.—Ulm, 1660, 8vo.



many very imperfect descriptions, which, nevertheless, refer evidently to diseases widely different.

After a short review of the structure of the skin, Willis<sup>1</sup> divides the diseases to which it is liable, into two sections, as they show themselves *vel cum, vel sine tumore*. The affections *cum tumore* are farther *general* or *particular*. Of the former several invade with fever, variola, rubeola, the exanthemata and efflorescentiæ of infants; others without fever, prurigo, and the impetiginous and leprosy affections. The diseases *sine tumore* include the whole of the maculæ, ephelis, liver-spot, &c. These divisions were natural enough.

Bonetus<sup>2</sup> has gathered together into his useful collection a considerable number of rare cases of cutaneous disease, the greater number of which are taken from the *Ephemerides naturæ curiosorum*,<sup>3</sup> or the *Acta regiæ societatis medicæ Hafniensis*.<sup>4</sup> Imitating the example thus set, Magnetius in his *Bibliotheca medico-practica*,<sup>5</sup> has given a reprint of the work of Willis, quoted above, and by adding many interesting cases of cutaneous disease published by Blandini, Raymondus, J. Forti, B. Sylvaticus, Hagedorn, Rhazes, Schulz, Wedel, A. Saporta, Helwig, and others, has contributed to spread abroad information of much practical value.

Many observers have assisted the progress of cutaneous pathology, by the publication of particular cases, in the *Journals* or periodical *Collections*, with a view to demonstrate the utility of divers modes of treatment, or to make known certain rare forms of affections of the skin. As depositaries of this kind, I must mention the *Centuræ* of Laz. Riverius,<sup>6</sup> the *Observationes* of M. A. Severinus,<sup>7</sup> particularly with reference to Arabian elephantiasis of different parts of the body, and the collections of Zacutus Lusitanus;<sup>8</sup> Stalpartus van der Weil,<sup>9</sup> Felix Platerus,<sup>10</sup> Dodonæus, Benevinius,<sup>11</sup> Borellus,<sup>12</sup> Hagedorn,<sup>13</sup> Philip Hechstetter,<sup>14</sup> &c. More recently, several observers, Duncan,<sup>15</sup>

<sup>1</sup> Willis. De affectibus cutaneis, eorumque morbis. De medicamentorum operationibus, sect. iii. cap. v. p. 279. Opera omnia. Amstelodami, 4to. 1682.

<sup>2</sup> Bonetus (Th.) Medicinæ septentrionalis collatitia. Genevæ, 1684 et 1686, vol. ii. folio.

<sup>3</sup> This collection contains a very considerable number of cases that deserve to be consulted. Vide Index universalis Ephemeridum, &c. 4to. Norimbergæ, 1739, Art. Scabies, Gutta rosacea, &c.

<sup>4</sup> Acta regiæ societatis medicæ Hafniensis.—Interesting cases are also to be found in several other collections, particularly in the Collection académique des Mémoires, des actes, des sociétés littéraires étrangères, 4to. Paris, 1775.

<sup>5</sup> Mangeti (J. J.). Bibliotheca medico-practica: Cutis morbi, t. i. p. 803, et seq. fol. Genevæ, 1645.

<sup>6</sup> Riverii (Laz.). Observationes medicæ, et Obs. communicatæ, 4to. Parisiis, 1645.

In the works of Riverius I find notices of a gangrene of the skin, occasioned by the application of a blister thickly sprinkled over with powdered cantharides; of a case of retrocession of tubercles of the face, which was followed by fatal continued fever; of the use of an ointment of white precipitate in a case of impetiginous eczema (*impetigo fera*); of a salve of red precipitate in fungous onychia; of a case of erysipelatous eczema, under the name of *scabies pruriginosa*; of several instances of syphilitic eruptions in new-born infants or children; of a case of general squamous eruption, attended with excessive pruritus, which seems to be referable to general pityriasis, &c.

<sup>7</sup> Severinus (Marc Aurel.) De recondita abscessuum natura, 8vo. Neap., 1632. In this work we find a case of elephantiasis of the scrotum, with a figure (*De abscessibus muco-carneis*); a case of elephantiasis of the leg with a fig. (*utrimformis cruris abscessus*); a case of subcutaneous tumour of the skin, with fig.; and some rather interesting inquiries on epinictis (*De epinictidis et roseolis liber*).

<sup>8</sup> Zacuti Lusitani Opera, fol. 2 vol. 1649.—t. ii. p. 140.—Inveterata tinea, oleo bombacino curata.—De praxi medica admiranda, lib. iii. (obs. 136.) Ulcera manantia diuturna in universa corporis mole exorta, a case of eczema treated successfully by local and general bleeding, aluminous baths, diluents and purgatives, and cured at length by means of issues. Zacutus gives (lib. i.) a case of furfuraceous eczema of the scalp, cured by bathing the part with urine (obs. iii.); of phthiriasis of the eyelids (obs. lxx.); of rosacea cured by leeching (obs. lxxv.); of wart of the tongue, cured by the leaves of the chelidonium majus (obs. lxxix.); of pruritus of the genital organs (obs. xcii.); of variola in a pregnant woman (obs. xlvii.); of feid sweating (lib. iii. obs. lxxiv.); of bloody sweat (lib. iii. obs. xli.). &c.

<sup>9</sup> Stalpartus van der Weil, in his Obs. rar. med. Centur. 12mo. Leidæ, 1727, gives a case of ichthyosis with a figure; several cases of nevus; a case of anæsthesia, &c.

<sup>10</sup> Platerus (Felix). (Obs. libri tres, 12mo. 1660.) A great number of cases of cutaneous disease. (In superficie corporis dolore observ.; In discoloratione obs.), but often badly characterized, and the details overlaid with formulæ.

<sup>11</sup> Dodonæus (Remb.) (Medicinal. observ. exemp. rar. 12mo. Harderovici.) Elephantiasis Arabica; syphilitic eruptions; lepra; horny productions.

<sup>12</sup> Borellus (Pet.) (Hist. et obs. medico-physic. centur. 12mo. Castris, 1653.) Fungous tubercles after variola; accidental hairy and horny productions; purpura hæmorrhagica.

<sup>13</sup> Hagedorn (L.) (Obs. med.-pract. cent. iii. 12mo. Francof. ad Viadr.) Variola; variola in the fetus; measles, and its secondary diseases; prurigo, &c.

<sup>14</sup> Hechstetter (Ph.) (Rar. obs. med. decad., iii. 12mo. Aug. Vind.) Purpura; exanthemata with hemorrhage; elephantiasis scroti.

<sup>15</sup> Duncan (And.). Medical cases, 8vo. Edin. On Corrosive sublimate in several diseases of the skin; tinea; purpura.

Reil,<sup>16</sup> De Haën,<sup>17</sup> Gilibert,<sup>18</sup> &c., have published in their *Clinical Reports*, a very considerable number of cases and practical remarks, on the pathology and treatment of cutaneous diseases.

The great merit of the work of Turner<sup>19</sup> is its positive and practical character. In support of the doctrine he advances, he generally quotes one or more cases which he has either met with in his own practice, or which he borrows from the writings of others. He was the first who gave a good description of the various species of herpes (*herp. circinatus*, *herp. phlyctenodes*, *herp. zoster*), which he detaches definitely from herpes *exedens* vel *depascens*, i. e. lupus; he distinguishes the furunculus anthrax from true carbuncle; he gives a curious case after Willis, of the absence of perspiration (anhydrosis); he insists on the danger of suppressing copious or fetid ephidroses; he describes coloured or pigmentary nævi, vascular nævi, and degenerated nævi, and speaks of their treatment by means of the ligature, excision, and the application of escharotics; he relates after Job a Meekren a remarkable case of extensibility of the skin of the neck and breast.

The work of Lorry<sup>20</sup> is distinguished for its general views, and the broad manner in which the author there regards the study of the diseases of the skin. In these particulars, Lorry is undoubtedly superior to all the writers who preceded, and to the greater number of those who have followed him. He begins by studying the general organization and particular structure of the healthy skin; he compares its elements in the different regions of the body, and, after a rapid glance at its functions, he considers its relations with the other systems and organs of the economy. He next passes briefly in review the various modifications which the skin experiences under the influence of external agents—the air, varied temperatures, climates, and applications of all kinds; he then takes note of the effects of the ingesta, food and drink; of rest and exercise; of sleep and watching; of the affections of the mind, &c. He next specifies the influence of whatever is internal or organic, such as of the strumous constitution, of suckling, of the variolous, venereal, morbillary virus, &c., and insists on the necessity of a careful inquiry into the probable causes of each affection. The prognosis he studies comparatively in children, adults, and the aged; he insists strongly upon the danger of repelling cutaneous eruptions, and he revives and develops the Hippocratic division of the diseases of the skin, into those which are determined thither by internal affections, and into those which are produced by a merely local morbid process.

His general views of the treatment of cutaneous diseases are of the very highest interest; he makes us sensible of the necessary and important modifications that must be made in the treatment, according as the eruptions have arisen under circumstances in which they must be considered as critical, depurative, or dangerous to cure; according as they indicate a slow or speedy solution of internal maladies; and lastly, as they are entirely local, and capable of being combated by external or topical means. Lorry's work, so rich in these practical views, is, however, very deficient in particular descriptions of individual diseases; here we constantly feel the want of precision in the determination of species, which are often imperfectly described, in several chapters, and under different names.

Cotemporary with Lorry, Plenck<sup>21</sup> arranged the diseases of the skin into classes, in the hope of facilitating the study of this branch of pathology, and rendering the diagnosis of the individual affections more certain. This classification is founded on the *external appearances* of the diseases themselves, consequently on their most recognizable characters. Plenck formed fourteen classes of cutaneous diseases: 1mo. *Maculæ*; 2do. *Pustulæ*; 3io. *Vesiculæ*; 4to. *Bullæ*; 5to. *Papulæ*; 6to. *Crustæ*; 7mo. *Squamæ*; 8vo. *Callositates*; 9mo. *Excrementia cutanea*; 10mo. *Ulcerata cutanea*; 11mo. *Vulnera cutanea*; 12mo. *Insecta cutanea*; 13mo. *Morbi unguium*; 14to. *Morbi pilorum*.

<sup>16</sup> Reil (J. C.). (Memorab. clinic. faciculi, 8vo. Halæ, 1789–91–92.) Hemorrhæa petechialis; pemphigus; diseases consecutive to measles and small-pox.

<sup>17</sup> De Haën (A.) (Ratio Medendi. Viennæ et Paris.) Variola; inoculation; rubeola; scarlatina; critical and non-critical sweats.

<sup>18</sup> Gilibert (J. E.) (Adversarie medico-practica, 8vo. Lugd., 1791.) Cancer of the skin; scabies; ulcers; variola; pemphigus, syphilis, &c.

<sup>19</sup> Turner (D.). A treatise of diseases incident to the skin, 8vo. Lond. 1714; itrum 1726, &c. Trad. Franc. 12mo. Paris, 1743.

<sup>20</sup> Lorry. Tractatus de morbis cutaneis, 4to. Parisiis, 1777.

<sup>21</sup> Plenck (Joan. Jacob.) Doctrina de morbis cutaneis, quæ hi insuas classes, genera et species rediguntur. Viennæ, 1776, 8vo. Ibid. 1783, 8vo. Lovani, 1796.



The end and object of this classification were evidently to facilitate the diagnosis of cutaneous diseases, not to convey information in regard to their nature, which is not always in relation with their outward appearance; it was, in a word, an artificial method of arriving at the determination, or at the knowledge of species, without which, no study can be rendered precise, and no conclusions can be held rigorous. It is even easy to see that Plenck had no intention of giving a classification of the diseases of the skin according to their nature; it is therefore unfair to reproach him with the diversity of the elements which compose his classes. The classes present imperfections which have arisen more particularly from his not having always stuck with sufficient closeness to what were in fact the most striking external characters of the species which he has arranged together in each of his different groups.

Willan,<sup>1</sup> in his system of classification, starts essentially from the same point as Plenck; but instead of attaching himself, like the German author, to the most striking feature of the diseases of the skin, at any and every period in their progress, he assumes the character which they present at their highest pitch of development—at their *erect* or *height*, and before they have undergone any consecutive alteration, as the element of his distribution. In the majority of cases, the diseases of the skin are much more strikingly characterized at this stage, than they are either before or afterwards, by the appearances which precede or follow them, and which are frequently common to several affections. Willan has, in conformity with this view, suppressed the classes of *ulcers*, *crusts*, &c. His groups are better ordered than those of Plenck. He never mingles, as the latter does constantly, *symptoms* with *diseases*; and a much more accurate knowledge of the eruptions themselves than Plenck possessed, enabled Willan to judge more precisely of their proper places in his different groups. Several of these are even extremely natural, such as the *papule*, the *squamæ*, the *bullæ*, and even the *exanthemata*, if purpura be struck out of it; on the other hand, the *tubercula* includes diseases of the most dissimilar descriptions. The great characteristics of Willan's writings are the impress they bear of the scientific spirit that guided him in his researches; the great precision, and the purity of his descriptions; the particular pains he takes to select well, and to use judiciously, his technical expressions; lastly, the taste and the sound judgment he displays in his interpretation of the ancients. If there be aught with which he is chargeable in the way of omission, it is with having paid too little attention to the relations of the diseases of the skin to the state of the constitution, to anterior diseases, and to those affections which are attributed to their repercussion. His therapeutics is in general active; his practice, his writings, and the works which have issued from his school, contributed powerfully to extend the free use of purgatives, and the internal employment of a variety of powerful medicines, such as the tincture of cantharides, the mineral acids, and the preparations both of antimony and arsenic in the treatment of cutaneous affections.

Bateman, by completing the works of Willan, and reproducing them in an accessible and elegant form,<sup>2</sup> contributed greatly to extend a knowledge of the diseases of the skin. Bateman also in his edition of the atlas, commenced by Willan, gave figures of a considerable number of diseases of the skin.<sup>3</sup>

The works of these celebrated pathologists were recast by Gomez,<sup>4</sup> and published in the shape of a *synoptical* table of the diseases of the skin; by Em. Szalay<sup>5</sup> in his inaugural dissertation, in the form of a *Manual*; and by Bertrand<sup>6</sup> and Ab. Hanemann and Sprengel,<sup>7</sup> who spread a knowledge of them over France and Germany.

<sup>1</sup> Willan (Robert). Description and treatment of cutaneous diseases, 4to. London, 1788-1814, with plates. Reports on the diseases of Lond., 12mo. 1801.

<sup>2</sup> Bateman (Thos.) A Practical Synopsis of Cutaneous Diseases, 8vo. Lond., 1813; 5th edition, 1819; 7th edit., 1829.

<sup>3</sup> Delineations of cutaneous diseases, 4to. London, 1817. Reports on the diseases of London, 8vo. London, 1819. Dr. Anth. Todd Thomson published in 1829 an abstract of Bateman's Atlas, with the addition of several original figures.

<sup>4</sup> Gomez (B. A.) Ensaio dermosographico, o succinta e systematica descripção das doenças cutaneas, etc. com indicações dos respectivos remedios aconselhados, 4to. Lisbon, 1820.

<sup>5</sup> Szalay (Emeric). Diss. inaug. sistens synopsis morborum cutis secundum causas externas dispositum. Vindobonæ, 1818.

<sup>6</sup> Atrégé pratique des maladies de la peau, etc., par Thomas Bateman, traduit de l'anglais par Bertrand, sur la 5th édition, 8vo. Paris, 1829.

<sup>7</sup> Praktische Darstellung der Hautkrankheiten nach Willan's System bearbeitet

The little work of Retz<sup>8</sup> has no pretensions to a scientific character; it is simply a collection of notes, and of cases, concisely detailed, having for the most part a practical end. It includes instances of cheloid tumour, of strumous tetter, of eruptions about the genital organs of men and women, and a variety of observations on the constitution, and on the physical and moral character of individuals habitually subject to herpetic affections. The author speaks of the influence which diseases of the skin of the face exert on the tastes and habits of females of a certain age; he mentions the relations of the diseases of the skin to gout and the affections of the urinary organs; he dwells on the difficulties almost always connected with the treatment of cutaneous diseases, and the frequency of relapses among individuals who will not consent to follow the course prescribed, whether it be medicinal or dietetic, in every the most minute particular.

At a time when almost all the chronic diseases of the skin of the face, trunk and extremities, were designated in France under the name of *dartres*, which corresponds to the English word *tetter*, and was interpreted by the Latin term *herpes*, the college of medicine of Lyons proposed as the subject of a prize: To determine the various species of *tetter*, their causes, their symptoms, and the diseases that depend on them. The prize was awarded to the dissertation of H. J. A. de Roussel.<sup>9</sup> Sauvages<sup>10</sup> had admitted nine species of *tetter* (independently of *psyracia*, *hydræa*, *epinyetis*, *rosacea*, *ephelis* and *vitiligo*); comprising, 1st, furfuraceous tetter; 2d, crusted tetter; 3d, milary tetter; 4th, eating tetter; 5th, syphilitic tetter; 6th, garter-like tetter; 7th, collar-like tetter; 8th, pustular tetter (*Dart. boutonniée*); and 9th, *zona*. The species admitted by Roussel are in general better characterized, and bear greater affinity to those which are still described at the present day under other names. Under the head of *herpes furfuraceous*, he evidently includes the papular and squamous affections; in his *squamous running tetter* or *dartre vive*, we recognize the characters of excoriated eczema, and his crusted tetter corresponding to our impetigo. Roussel endeavoured to discover and to point out the signs by means of which we may ascertain whether a cutaneous eruption is the depository, as it were, the crisis or the solution of an internal disease, or exists *per se*; and this forms one of the striking characteristics of his work, which is further remarkable for the efforts the author makes to approximate and bring into harmony the imperfect descriptions of his predecessors, rendered still more obscure by the diversity of nomenclature universally employed.

The small treatise of Poupert<sup>11</sup> has no interest otherwise than as it contains several observations on the repercussion and on the metastases of chronic diseases of the skin, and even the greater number of his facts are derived from the writings of Ballonius, Mead, Sauvages, Raymond, Tissot, &c. The instances he gives are dysuriæ, leucorrhæas and affections of the brain and lungs, supervening on the cure of cutaneous eruptions. Poupert also studied the action of the anemone pulsatis in cases of tettery eruption, and quotes several instances of its efficacy in their cure.

Jackson<sup>12</sup> has treated at great length of the *causes* and of the *nature* of the diseases of the skin; which he nevertheless only considers in a very vague and general manner. He divides them into *three* groups; 1st. Morbid secretions of the subaceous glands; 2d. Morbid states of the bulbs of the hair; 3d. Morbid conditions of the cutaneous vessels.

Chiarugi<sup>13</sup> limits his researches to the chronic and *crusted* (*sordide*) diseases of the skin. He divides them into three orders: 1st, crusted papular diseases (impetigo, herpes); 2d, crusted phlyctenoid diseases (achor, rognæ); 3d, crusted pustular diseases (gotta rosea, lepra, tinea). Under the name of *impetigo*, in the first group, he describes liehen pretty accurately, and gives a good definition of the disease; and, under the name of *herpes*, he includes the same diseases as the

von Th. Bateman, aus dem Englischen übersetzt von Abraham Hanemann, mit Vorrede und Anmerkungen von Kurt Sprengel, 8vo. Halle, 1815.

<sup>8</sup> Retz. Des maladies de la peau et de celles de l'esprit, 8vo. 2d edit. 1790.

<sup>9</sup> De Roussel (H. F. A.) Diss. de variis Herpetum speciebus, 8vo. Cadomi, 1779.

<sup>10</sup> Sauvages (Boissier de) Nosologia Methodica, 2 vols. 4to. Amstelod., 1768, vol. i. p. 32.

<sup>11</sup> Poupert. Traité des dartres, 12mo. Paris, 1784.

<sup>12</sup> Jackson (Seguin Henri.) Dermatopathologia, 8vo. Londres, 1791.

<sup>13</sup> Chiarugi (Vincenzo) Delle malattie cutanee sordide in genere e in specie, trattato teorico-pratico, 2 vol. 2da edizione.—Firenze, 2 vol. 1807.



ancients (*herpes miliaris*, *herpes zoster*, *herpes esthiomenes*). In the second group he describes, under the name of *achor*, eczema and impetigo of the face and hairy scalp, and scabies under the title of *roga*. The third group comprises *rosa*, or rosacea; *scabia*, which appears to be eczema; *lepra*, that is to say *lepra gracorum* and elephantiasis and *tigna*, the account of which corresponds to the furfuraceous, crusted and humid states of eczema and impetigo of the scalp. In a word, the work of Chiarugi, although posterior in point of time, is immeasurably inferior to that of Willan.

Wilson<sup>1</sup> divided the diseases of the skin into, 1st. Febrile eruptions (urticaria, miliary eruption, varicella, variola, vaccina, pemphigus, rubeola, scarlatina). 2d. Simple inflammations (excoriations, burns, chilblains, &c.). 3d. Constitutional inflammations (erysipelas, efflorescentiae, rednesses of the face, &c.). 4th. Papular eruptions. 5th. Vesicular eruptions (scabies, eczema, zona, herpes, aphthæ). 6th. Pustular eruptions (pustular scabies, impetigo, porrigo, crusta lactea). 7th. Infantile eruptions (strophulus). 8th. Squamous eruptions (lepra, psoriasis, syphilitic blotches, elephantiasis). 9th. Tumours (acne, follicular enlargements, furuncles). 10th. Excrescences (corns, warts). 11th. Spots (lentigo, ephelis, purpuræ, nævi). 12. Wounds. 13th. Ulcers (simple ulcer, depressed ulcer, callous ulcer, fungous ulcer, syphilitic ulcer, scorbutic ulcer, scrofulous ulcer). In an appendix he makes a number of remarks on the spontaneous disappearance of certain cutaneous eruptions which was followed by various nervous symptoms. One of the inherent vices of this classification is its want of unity; this, however, is a reproach that may be made to almost all the systems of classification of the diseases of the skin that have yet been proposed. In the formation of his groups, the author has attended at once to the nature of the diseases, to their relations with the constitution, and to their outward appearances. A more serious objection may be raised to the mode in which some of his groups are composed; though we must still allow that the first group, were erysipelas added to it, would be extremely natural.

Mr. Plumbe<sup>2</sup> not very long ago published a new distribution of the diseases of the skin. The first section includes those diseases which derive their distinguishing characters from *local peculiarities* of the skin (acne, sycosis, porrigo); the second section comprises such diseases as depend on a *debilitated state* of the constitution, and, consequently, on a *diminution of tone in the vessels of the skin* (purpura, pemphigus, ecthyma, rupia). Sundry diseases, *generally beneficial* in their influence, symptomatic of derangement of the digestive organs, and characterized by active inflammation, form a *third* section (porrigo *favosa*, porrigo *larvalis*, lichen, urticaria, herpes, furuncle). A fourth section or group is characterized by a *chronic inflammation of the vessels which secrete the epidermis* (lepra, psoriasis, pityriasis, pellagra, ichthyosis, warts). A fifth and concluding section, comprises a host of diseases of the most dissimilar character (scabies, eczema, elephantiasis, erythema, &c.). There is unquestionably considerable ingenuity in several parts of this arrangement; but it is inferior to that of Willan. Mr. Plumbe's work, in other respects, is distinguished for its practical character, and for the importance which the author attaches to the connection of diseases of the skin with morbid states of the constitution.

M. Derien<sup>3</sup> divided the diseases of the skin into *acute* and *chronic*, and, as grounds of a subdivision, proposed their distinction into *essential* and *symptomatic*. Both Peter Frank<sup>4</sup> and Joseph Frank<sup>5</sup> adopted the division of the diseases of the skin into *acute* (exanthemata) and *chronic* (impetigines). But this system, rigorously applied, frequently and necessarily leads to the discussion of one and the same disease in two different sections, according as it happens to be evolved slowly or speedily, and to run its course tardily or rapidly. We consequently find *acute* urticaria placed by Joseph Frank in a first class under the usual title, *urticaria*, and the *chronic* affection in a

second, under the name of *urticatio*. *Acute* pemphigus is described in one section under the name of *bullæ*, and the *chronic* disease in another, under that of *pemphigus*. Against this view of Jos. Frank, it may also be shown that erythema, strophulus, herpes, ecthyma, mucifluent tinea, &c., are by no means uniformly chronic diseases, and that furuncle is not always acute. J. Peter Frank divides the *exanthemata* into *naked* and *scabrous*, and the *impetigines* into such as are confined to the *superficies* of the skin, and such as penetrate more *deeply*. Joseph Frank has described, almost without order, the various cutaneous affections arranged by J. P. Frank, in these two divisions. The secondary division which he has adopted of cutaneous affections into idiopathic and symptomatic is inapplicable in any system of classification as a basis for the formation of sub-orders; the distinction, however, is in itself of real value when applied to each disease in particular.

M. Alibert,<sup>6</sup> whose works have obtained so much celebrity, has attempted to connect the diseases of the skin into *families*. 1st. Teignes (T. faveuse, T. granulée, T. furfuracée, T. amiantacée, T. muqueuse).—2d. Pliques (P. multiforme, P. solitaire, P. en masse).—3d. Dartres (D. furfuracée, D. squameuse, D. crustacée, D. rongeante, D. pustuleuse, D. phlycténoïde, D. erythémoïde).—4th. Ephélides (E. lentiforme, E. hépatique, E. scorbutique).—5th. Concroïdes ou keloïdes.—6th. Lèpre (L. squameuse, L. crustacée, L. tuberculeuse).—7th. Pians (P. ruboïde, P. fongoïde).—8th. Ichthyoses (I. nacrée, I. cornée, I. pellagre).—9th. Syphilides (S. pustuleuse, S. végétante, S. ulcérée).—10th. Scrofules (S. vulgaire, S. endémique).—11th. Psorides (P. pustuleuse purulente, P. pustuleuse vésiculeuse, P. papuleuse, P. crustacée). No writer has seized with greater acuteness than M. Alibert, the various aspects of these diseases, nor has any one painted their principal characters in happier colours. His description of the teigne *faveuse* (favus), of the dartre *rongeante* (lupus), of the keloïde, of the dartre *squameuse humide* (discharging eczema), of scrofula, of the different syphilitic eruptions, &c., deserve to be particularly enumerated for their excellence. The work of this writer recommends itself to us farther, by the remarks and practical views, replete with interest, and the vast number of particular cases it contains, calculated to exhibit rare appearances presented by different forms of cutaneous disease, to demonstrate the efficacy of a variety of therapeutic means, and to show the salutary influences occasionally exerted by cutaneous eruptions on the general health, or to prove the dangers which attend on their repercussion. Still more recently, M. Alibert has published another and a more complete work,<sup>7</sup> in which he proposes a new classification of the diseases of the skin. The first (*dermatoses eczémateuses*), comprises the *inflammatory diseases*; the second (*dermatoses exanthémateuses*), consists of *febrile eruptions*; the third (*dermatoses teigneuses*), is formed of the affections of the hairy scalp; the four succeeding groups include *constitutional* affections, to wit, the fourth (*dermatoses dartreuses*), chronic eruptions, common to every part of the integuments; the fifth (*dermatoses cancéreuses*), cancerous affections; the sixth (*dermatoses lepreuses*), the squamous diseases; the seventh (*dermatoses varioleuses*), the variolous eruptions; the eighth (*dermatoses strumeuses*), the scrofulous affections; the ninth (*dermatoses scabieuses*), is distinguished by the general character of the diseases it includes to cause pruritus over the surface of the skin; the tenth (*dermatoses hémateuses*), includes ptechie and purpura; the eleventh (*dermatoses dyschromateuses*), comprises changes in the colour of the skin; the twelfth (*dermatoses hétéromorphes*), takes in various alterations not assigned or unassignable to any of the other classes. This classification<sup>8</sup> is deficient in unity of principle. The groups are evidently formed, now after the inflammatory character of the diseases,

<sup>6</sup> Alibert. Précis théorique et pratique sur les maladies de la peau, in 8vo. 2 vol. première édit. Paris, 1810. 2nde édit. Paris, 1822. Description des maladies de la peau observées à l'hôpital Saint Louis. Paris, 1825, fig. fol.

<sup>7</sup> Alibert. Monographie des Dermatoses, 2 vols. 8vo. Paris, 1832.

<sup>8</sup> Dr. Paget, in an essay on the advantages of the natural, compared with the artificial, method of classification in the study of the diseases of the skin, (in the Edinb. Med. and Surg. Journal, vol. xxxix. 1833, p. 255,) has endeavoured to prove that the classification of Alibert was natural. This opinion has been successfully combated by M. Ch. Martins, in his dissertation entitled, Les préceptes de la méthode naturelle appliqués à la classification des maladies de la peau, 4to. Paris, 1834, who ought, however, at the same time to have acknowledged that the arrangement of Willan was artificial; he might still have demonstrated its superiority. M. Baumés, in his Lettre d'un Médecin de Province aux dermatophiles des Hôpitaux de Paris, 1834, has over-

<sup>1</sup> Wilson (John). A familiar treatise on cutaneous diseases, 8vo. London, 2d edition, 1814.

<sup>2</sup> Plumbe (Samuel). A practical treatise on diseases of the skin, 8vo. London, 1824. Philadelphia, 1837.

<sup>3</sup> Derien (Jacques). Essai d'une table synoptique des maladies de la peau, 4to. Paris, 1806.

<sup>4</sup> Frank (Joan. Petr.). De curandis hominum morbis epitome. Mannheim et Vienne, 1792.

<sup>5</sup> Frank (Joseph). Præceps medicæ universæ præcepta, 8vo. Taurini, 1821.—Vol. iii. iv. De morbis cutis.



now after their febrile character; again, from their seat, again, from their causes, &c. It is, besides, enough to cast the most cursory glance over the titles of the different diseases included in the several groups to be made aware of the heterogeneity of the elements that enter into several of them; an inconvenience which is not made up for, as in the classification of Willan, by the accrual of real advantages as concerns the diagnosis. These groups, moreover, with the exception of the two comprising the syphilitic and the strumous affections, have little value in a practical point of view.

Messrs. Cazenave and Schedel<sup>1</sup> have adopted the classification of Willan, but without assigning any place in the system to lupus, pellagra, the syphilitic eruptions, purpura, elephantiasis arabica and the cheloid formation. Their work is constructed on the same plan as that of Dr. Bateman, and like his, contains a very good summary of the principal diseases of the skin.<sup>2</sup> It is enriched with the observations of M. Bielt on lupus and the syphilitic eruptions, which are here described with particular care. It also contains the results of this practitioner's experiments with the iodurets of mercury and sulphur, the action of which on the economy, and the circumstances under which they may be advantageously used, he was the first to study. Like the English pathologists and M. Bielt, the Messrs. Cazenave and Schedel are bold in their recommendation internally of many very active medicines, such as the tincture of cantharides and the preparations of arsenic, in the treatment of the more inveterate and rebellious chronic diseases of the skin.

The work of M. Gilbert<sup>3</sup> has a greater show of erudition than that last mentioned, and contains several concise but well chosen cases, and interspersed remarks of a practical character on the diseases of the skin, considered in their relations with the constitution and the various morbid states it exhibits. His classification, in conformity with that of Willan, has its inherent advantages and inconveniences.

In a systematic *synopsis* Struve<sup>4</sup> has specified almost every known variety of disease of the skin. Mr. Wilkinson<sup>5</sup> has made several pertinent remarks on the treatment of the diseases of the skin; the tract of Mr. Kelson<sup>6</sup> is without interest.

M. S. Grimaud<sup>7</sup> has divided the diseases of the skin into five orders; 1st, diseases of the corpus reticulare; 2d, diseases of the papillæ; 3d, diseases of the infundibuliform cavities; 4th, disease of the follicles.

Baker has proposed to divide the diseases of the skin into two classes, one of which, the *epidermic* diseases, includes the squamous, vesicular and bullous affections, and the other,—the diseases of the *dermis*, embraces our papulæ, tubercula and pustulæ. Dr. Craigie<sup>8</sup> has likewise given a distribution of the diseases of the skin upon anatomical grounds which corresponds very nearly with that of Willan.

Mr. Dendy<sup>9</sup> has attempted a classification of cutaneous diseases,

the utility of which is more especially apparent when children are their subjects. His distribution comprises the following classes: 1st, diseases symptomatic of derangement in the alimentary canal; 2d, diseases symptomatic of disorders in the functions of assimilation; 3d, diseases symptomatic of external excitement or stimulation, and of particular idiosyncrasy; 4th, diseases produced by specific contagions; and 5th, local diseases without constitutional derangement.

M. Ch. Billard<sup>10</sup> has also made some observations on the cutaneous diseases of children, which he distributes after the classification of Willan.

Messrs. Unger<sup>11</sup> and J. L. Schönlein<sup>12</sup> have imagined that they could discover certain relations between the diseases of the skin and what they entitle the *exanthemata* of plants.

J. Fantonetti<sup>13</sup> has made important additions to the subject of pellagra in the translation which he has given of the 1st edition of my work, which has also been rendered into English by Mr. Dickinson<sup>14</sup> with the suppression of the particular cases, with a view to making it more elementary.

To complete this review of the works of those who have contributed by general observations, the publication of particular facts, by their special studies, and treatises *ex professo*, lastly, by their critical and learned investigations and their elementary works to illustrate or render more easy the study of the diseases of the skin,<sup>15</sup> I ought still to mention a great number of *monographs* on almost every one of these diseases individually, and a variety of memoirs containing therapeutical experiments. But as the value of these references will be greatly increased by being given in connection, either with the general and preliminary considerations on the treatment of the acute and chronic inflammatory affections of the skin, or in the *Historical Notices* that will be found at the end of the description of each particular disease, I shall reserve them for these places. Let me in this place, however, mention the researches of Dazille<sup>16</sup> on the diseases of the skin in the negro; those of Wilson<sup>17</sup> on the same class of affections among the Hindoos, and the admirable observations of Adams<sup>18</sup> on morbid poisons (a).

(a) To the above we may add A short Treatise on the External Characters, Nature and Treatment of the different forms of Porrigio or Scalled Head and Ringworm. By Walter Dick., d. 1838. *Nouvelle Dermatologie, ou Précis théorique et pratique sur les Maladies de la peau*, &c. Times deux, 1842. Par P. Baumes. Manual of Diseases of the Skin. From the French of MM. Cazenave and Schedel. With notes and additions by Thomas H. Burgess, M. D., 1842. A Practical and Theoretical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Skin, &c. By Erasinus Wilson. London, 1842. Philadelphia, 1843.

looked the advantages of Willan's classification, erroneously disputed the utility of determining *species*, and gratuitously supposed that those who adopted the grounds of this arrangement look no heed of the other appearances of the diseases of the skin, in exposing their characters and establishing their diagnostic features. Otherwise, he insists with reason on the importance of the study of the causes, and of the various conditions which precede or accompany the development and progress of diseases of the skin.

<sup>1</sup> Cazenave et Schedel. *Abrégé pratique des Maladies de la Peau*. 8vo. Paris, 1828. 2me edit. ib. 1833. English translation, Philadelphia, 1829.

<sup>2</sup> The work of these gentlemen is indeed all that Dr. Rayer says it is. But let us here do Dr. Rayer the justice which he has not done himself. The *Abrégé Pratique* of Cazenave and Schedel, is an abridgment of the first edition of this, his own work, with the additions and alterations he indicates. There is another work published in England so recently that Dr. Rayer could not be aware of its existence, which owes much to the same source whence Cazenave and Schedel drew. As a manual it is every way superior to the *Synopsis* of Bateman, and has the advantage over the *Abrégé Pratique* in having been written by an individual intimately acquainted with the subject. This is "A practical compendium of the Diseases of the Skin, by J. Green, M. D." 8vo. Lond. 1835. R. W.

<sup>3</sup> Gilbert. *Manuel des maladies spéciales de la peau*, 12mo. 1834.

<sup>4</sup> Struve (Lud. Aug.). *Synopsis morborum cutaneorum*, fol. 8vo. Berlin, 1829.

<sup>5</sup> Wilkinson (J. H.). *Remarks on cutaneous diseases*, 8vo. London, 1822.

<sup>6</sup> Kelson (T. M.). *A few hints relative to cutaneous complaints*. London, 1820.

<sup>7</sup> *Lancette Française*, 1831, p. 327.

<sup>8</sup> Craigie. *Elements of general and pathological anatomy*, 8vo. Lond. 1823.

<sup>9</sup> Dendy (Walter). *Treatise of the cutaneous diseases incidental to childhood*, 8vo. London, 1827.

<sup>10</sup> Billard (Ch.). *Traité des maladies des enfans nouveau-nés et à la mamelle*, 8vo. Paris, 1823; 2e édition, avec notes, Paris, 1833. 8vo.

<sup>11</sup> Unger. *Die Exantheme de Pflanzen pathogenetisch und nosographisch dargestellt*. Wien, 1833.

<sup>12</sup> Schönlein's *Allgemeine und specielle Pathologie und Therapie*. Würzburg, 8vo. 1832.

<sup>13</sup> Fantonetti (G. B.). *Trattato teorico e pratico dei mali della pelle*. Milano, 1830.

<sup>14</sup> Dickinson (Will.). *Treatise on diseases of the skin*, 8vo. London, 1833.

<sup>15</sup> I here give the titles of several works which I have not been able to consult: Atsbury. *Diss. de morbis cutaneis*. Edinb. 1787.—Boncursius, Barthol. *Opusculum malis externis*. Bonon. 1656, 8vo.—Cartheuser. *Diss. de morbis cutaneis*.—Francof. ad Viadrum, 1760.—Dimsdale. *Diss. de morbis cutaneis*. Edinburgh, 1773.—A'Dob-scha. *F. de cute et de morbis cutaneis*. Jenæ, 1805.—Hartmann. *Diss. de culis exterioris morbis*. Regiom. 1736.—Jessenius, J. *De cute et cutaneis affectibus*. Pragæ, 1611.—Jenfilamm. *Diss. de morbis cutaneis*. Erlangæ, 1771.—Nebel. *Diss. antiquitates morborum cutaneorum sistens*. Giessæ, 1793.—Schulze. *Diss. de cutis exterioris morbis*. Halle, 1740.

<sup>16</sup> Dazille. *Obs. sur les maladies des negres*, 2 vols. 8vo. Paris, 1782.

<sup>17</sup> Wilson (H. H.) has published a paper on the lepra of the Hindoos, or Kushia, on a morbid enlargement of the skin of the thigh, and a similar affection of the skin of the neck in the 1st and 4th vol. of the *Trans. of the Med. and Phys. Society of Calcutta*. In the same series a curious case of eruptive morbus pedicularis may be found. The insects were very small but still visible to the naked eye.

<sup>18</sup> Adams on morbid poisons, 4to. Lond. 1807.



# A T R E A T I S E

## ON THE

# D I S E A S E S O F T H E S K I N .

### CLASSIFICATION.

1. In this work I comprise, under the general title of DISEASES OF THE SKIN, every morbid condition which shows itself on the exterior of the body by some distinguishing character. Many of these affections are preceded, accompanied or followed, by lesions of one or more of the other tissues, and occasionally by modification of the general circulating fluid; the alteration of the skin, which is assumed as characterizing them, is, in fact, only one of their more evident features.

2. The study of the diseases of the skin demands, as a preliminary, a knowledge of its general conformation, of its intimate structure, and of its functions. Diseases of the integuments at large naturally fall under two grand divisions—as they affect the skin itself, or the parts which are connected with it.

3. The skin may be the subject of wounds, of acute and chronic inflammation of different kinds, of anemia, hemorrhage and congestion, of neuralgic pain, of accidental blanching and discoloration, of original faulty conformation, and of changes of texture from the effects of disease. The parts dependent on the skin—the nails and hair—occasionally also present unnatural appearances, consequent on morbid alterations in the structures that prepare them. Moreover, several insects are found living and reproducing their kind on the surface and in the substance of the integuments.

4. The following table presents, at one view, the names of the principal alterations of the skin and its dependencies, and the order in which they will be successively described. Wounds, being within the domain of pure surgery, will not be noticed in this work. I should also have abstained from speaking of certain other affections, entirely foreign, in their commencement at least, to the skin, had their true seats been more generally known, and had I not hoped to throw some light on their nature and treatment. I have not, however, thought it advisable to introduce into the table the titles of several diseases which are still but little understood, such as the Aleppo pustule, Radesyge, Frambæsia, &c., the description of which I have inserted in the appendix that will be found at the end of the work.

TABLE.

DIVISION I. Diseases of the Skin.	CHAPTER I. Inflammatory af- fections, distri- buted according to the number and form of their elementary le- sions.	SECTION I. Having a single ele- mentary form.	1. EXANTHEMATA.—Erythema, ery- sipelas, tubercula, roseola, scarlatina, urticaria; artificial exanthemata. 2. BULLE.—Pemphigus, rupia; arti- ficial bullæ—blisters, ampullæ. 3. VESICULÆ.—Herpes, eczema, hy- drargyria, scabies, miliaris sudato- ria, (suetie militaire,) sudamina; arti- ficial vesicles. 4. PUSTULÆ.—Variola, varicella, vac- cinia, vacciniella, acne, rosacea, syccosis, impetigo, favus, ecthyma; artificial pustules. 5. FURUNCULI.—Hordeolum, furuncu- lis, anthrax. 6. GANGRENÆ.—Anthraxion vel pus- tula maligna, anthrax pestis. 7. PAPULÆ.—Strophulus, lichen, pru- rigo; artificial papulæ. 8. SQUAMÆ.—Pityriasis, psoriasis, le- pra, pellagra; artificial squamæ. 9. TUBERCULA.—Lupus, scrofula, can- cer; elephantiasis Græcorum; arti- ficial tubercles.

#### DIVISION I. Diseases of the skin.

CHAPTER II. Peculiar states of the skin not re- ferable to in- flammation.	SECTION II. Having se- veral ele- mentary forms.	1. SYPHILIS. 2. AMBUSTIO. 3. PERNIO.	Exanthematica, bullo- sa, vesiculosa, pus- tulosa, squamosa, pu- puloa, tuberculosa, vegetativa. Exanthematica. Bullosa. Gangrenosa. Exanthematica. Bullosa. Gangrenosa.
CHAPTER III. Morbid states of the secreting functions of the skin.	ANEMIE. CONGESTUS SANGUINEL. HÆMORRHAGIE.		Purpura (Petechiæ, Vi- bices, Ecchymoses, Dermatorrhagia).
CHAPTER IV. Neuroses of the skin.	PERSPIRATIONIS. Ephidros. EPIDERMIDIS. Exfoliatio.		
	ANÆSTHESIA, Hyperæsthesia.		
	PIGMENTI (Achromata; Dyschromata).		Albinismus seu Leuco- pathia. Nigrities, Ephe- lis, Lentigo, Chloasma, Melasma, Nævus pig- mentarius, Color cæru- leus, Color sub flavus; artificial discolorations.
CHAPTER V. Faulty structure, or unusual states of one or other of the elements of the skin.	PAPILLARUM et epider- mis. HYPERTROPHIE Vasorum cutis. GANGRENA SIM- PLEX. CICATRICES. DEFECTUS CON- GENITUS CUTIS. EXTENSIO VEL RELAXATIO IN- SOLITA CUTIS.		Ichthyosis, Verruca, Producta comea, Ty- losis. Phlebeetasia, angiecta sia capillaris, Nævus araneus, flammeus, &c. Tumor vascularis.
	CORII, Mem- branae Cel- lularis sub- cutaneæ, et teles adipo- sæ.		Cheiloidea, Tumores vari, Elephantiasis arabica, Andrum et Pedarthoræ Barba- does Leg. &c.
CHAPTER VI. Degenerations.	DEGENERATIONES FIBROSÆ. MELANOSIS. DEGENERATIONES TUBERCULOSÆ.		

#### DIVISION II. Alterations of the dependen- cies of the skin.

CHAPTER I. Special diseases of the Sebaceous Follicles.	CHAPTER II. Special diseases of the piliferous follicles.	CHAPTER III. Special diseases of the ungual matrices and al- terations of the nails.
Secretio aucta, Vermes sebaci, Levatio follicularis, Tumor follicularis, Calculi folliculorum.	Atrophia, defectus congenitus pilorum. Pili supernu- merarii; Incrementum insolitum Pilorum, Coactio, pilorum, Alopecia, Canities, Plica.	Onychia, Vicia conformationis et structuræ unguium; Ecchymosis subunguealis; Incrementum insolitum Unguium; Situs insolitus; Ficus; Defectio, dege- neratio; Productio et Reproductio, &c.

#### DIVISION III. Foreign bodies on the surface, under, or in the substance of the skin.

PARASITIC INSECTS infesting the skin of man.
Pediculi; Pulices; Acarus Scabici; Filiaria medi- nensis; Oestrus.

5. All the diseases specified in these different groups show themselves on the external surface of the integuments by distinguishing characters. In all, the skin is affected in a greater or less degree; but some of them are also preceded or accompanied by febrile symptoms, and by other functional organic lesions. Lastly, a great many of them, independently of the alterations of the skin, by which they are outwardly proclaimed, are evidently connected with morbid conditions of the blood, of the nervous system, or of some internal organ or system of organs. Diseases of the skin require, therefore, to be studied more deeply than in their mere external appearances.

# FIRST DIVISION.

## DISEASES OF THE SKIN.

### CHAPTER I.

#### INFLAMMATORY AFFECTIONS OF THE SKIN.

##### PRELIMINARY CONSIDERATIONS.

6. I COMPREHEND, under the generic title of *Inflammation of the Skin*, all those diseases which are characterized, externally, by the accumulation of blood in a point, a district, or the whole of the surface of this membrane, become the seat of morbid sensations: a phenomenon which is followed by resolution, desquamation, adventitious secretion or ulceration.

7. These diseases, as numerous as they are various, studied generally in their external characters,—those characters, namely, which are at once the most easily appreciated,—present themselves, when at their height, under aspects that are reducible to eight principal forms:

1°. *Exanthemata*, distinguished by a generally diffused red tint of the skin; or by red, or reddish distinct blotches, scattered over its surface, and terminating by resolution, delitescence or recession and desquamation.

2°. *Bullæ*, or small, aqueous, and generally transparent vesications, formed by an effusion of serum or coagulable lymph beneath the raised epidermis.

3°. *Vesicles*, or small serous, transparent elevations, differing from bullæ in their inferior size, and formed by a small quantity of serum, with or without coagulable lymph, deposited under the epidermis. This serum, or lymph, may be again absorbed, or by the rupture of the vesicles, be effused upon the surface of the skin. Vesicles are followed by desquamation, by superficial excoriations, or by small, thin and laminated scabs or crusts.

4°. *Pustules*, or elevations formed by pus, or a morbid matter differing from serum, deposited either in a follicle under the epidermis, or in the texture of the true skin. Pustules commonly dry off into hard, thick scabs, which occasionally conceal excoriations or ulcers of variable depth.

5°. *Papulæ*, or hard and solid elevations, almost always attended by itching. They end in resolution or desquamation, when their heads are not picked off by the nails, in scratching.

6°. *Squamæ*, formed by laminae of the epidermis, altered and dried, which are continually detached from the surface of the inflamed skin.

7°. *Tubercles*, or small solid, circumscribed, and enduring tumours, larger than papulæ. They terminate in resolution, induration, partial suppuration or ulceration.

8°. *Furuncles*, or solid tumours, larger than tubercles, developed in the subcutaneous cellular tissue, and in the interspaces of the

skin. They terminate by suppuration with the expulsion of a core or sloughy substance.

8. These various forms cannot be regarded as degrees of one mode of irritation; for they are not all seen changing the one into the other, under the influence of artificial and graduated forms of irritation. Many of them are developed in distinct elements of the skin, and constantly display the same characters when they return, after having disappeared during a longer or shorter space of time. The special cause, under the influence of which an inflammation of the skin appears and produces a vesicle, rather than a pimple or a scale, is as yet unknown.

9. All inflammatory affections of the skin, except those that are designated *gangrenous*, and whose elementary form varies and is little known, may be easily referred, during the period they remain at their height, to one or to several of these forms, the characters of which are definite and readily appreciable.

##### FORMS OF CUTANEOUS INFLAMMATION.

###### § 1. Having a single elementary form.

(A) *Exanthematous*, diffuse or spreading inflammations—Erythema, erysipelas, rubeola, roseola, scarlatina, urticaria, artificial exanthemata.

(B) *Bullous*, or effusive inflammation.—Pemphigus, rupia, phlyctenæ, artificial bullæ, blisters, ampullæ.

(C) *Vesicular* inflammations.—Herpes, sudamina, eczema, hydrargyria, scabies, miliaria sudans, artificial vesicles.

(D) *Pustular* inflammations.—The variolous eruptions,—variola, varicella; the vaccine eruptions,—vaccinia, vaccinella; gutta rosea, aene, sycosis, impetigo, favus, ecthyma, artificial pustules.

(E) *Furunculous* inflammations.—Hordeolum, furunculus, anthrax.

(F) *Gangrenous* inflammations.—Anthraxion, malignant pustule or Persian fire; gangrenous carbuncle, typhoid inflammatory gangrene.

(G) *Papular* inflammations.—Strophulus or gum, lichen or sunrash, prurigo or itchy-rash, artificial papulæ.

(H) *Squamous* inflammations.—Pityriasis or dandriff, psoriasis or scaly tetter, lepra or scaly leprosy, pellagra, artificial scaly inflammations.

(I) *Tubercular* inflammations.—Lupus, elephantiasis, scirrho-carcinoma or cancer, artificial tubercles.

###### § 2. Having several elementary forms.

(A) *Burns*.—Exposure to excessive temperature is followed by exanthematous, bullous, or gangrenous inflammation.

(B) *Frost-bite*.—Exposure to very low temperature is, also, succeeded by exanthematous, bullous, or gangrenous inflammation.

(C) *Syphilitic affections* produce exanthematous, vesicular, bullous, pustular, papular, scaly, tubercular, and forms of inflammation attended with morbid growths.

10. I have already noticed the chief defects of this classification.



The most important, undoubtedly, is that of uniting, under several particular groups, affections which are foreign to each other in their progress, their tendency, and their mode of treatment; and of separating others, such as the *eruptive fevers*, which have so striking an analogy with each other. These serious inconveniences, which I wish not to conceal, are counterbalanced, however, by the facility and precision of the diagnosis we are enabled to establish by means of the artificial arrangement adopted: and this, on reflection, appears to be the principal, and perhaps the only advantage to be expected, in the present state of knowledge, from nosological classification<sup>1</sup>

11. *Ulcers*.—In the above enumeration of the inflammatory affections of the skin, I have made no mention of ulcers. These, in fact, constitute no primary alteration, or initiatory form of cutaneous disease. They are always consequent on subcutaneous abscesses, or on vesicular, pustular, tubercular, or some other form of inflammation. Moreover, the description of ulcers cannot be detached from the discussion of the various inflammations that produce them. I have, for the same reason, connected the description of chaps and fissures with the account of the diseases that occasion them,—erythema, eczema, lichen, psoriasis, syphilitic affections, &c.

12. *Scabs and crusts*.—Neither can these, which are formed by matters deposited and dried on the surface of the skin, whether ulcerated or not, be assumed as the distinguishing character of a genus. Independently of this, that, before being *encrusted*, diseases are vesicular, pustular, bullous, &c., a group formed after such a circumstance, would have been more vague than any of those we have adopted. Studied, however, as secondary phenomena, these crusts, in their mode of formation, their dimensions, their colour, their adherence, &c., present particulars calculated to characterize certain species—favus, rupia, &c.

13. The chemical analysis of the morbid liquid or dried secretions, poured out by the diseased skin, can only furnish characters of a very secondary interest; and yet the analyses that have been made of the vaccine lymph, of the true or modified variolous matter, of the matter of favus, of melanosis, &c., prove incontestably that no mode of investigation whatever is to be contemned.

14. The same remark is applicable to several other consecutive alterations. Thus, the dark stains formed by the deposit of a larger quantity of blood than natural in the tissue of the skin; the bran-like desquamation of the epidermis, caused by certain papular or vesicular inflammations; the cicatrices which variola, zona, rupia, vaccinia, lupus, ulcerated syphilitic eruptions, &c., leave, all present characters that immediately proclaim their origin to the practised eye.

15. When inflammation extends from the skin to the mucous membranes, they sometimes distinctly present the same forms of phlegmasiæ as the skin itself. The difference of structure, however, of these two grand divisions of the cutaneous system, necessarily introduces modifications into the mode of development, and the appearance of the various forms of inflammation affecting their surface. Farther, the symptoms peculiar to each of these different forms, though easily appreciated in the skin, are much more obscure in the mucous membranes.

16. *Local symptoms*.—Some, among the inflammations of the skin, are constantly either acute or chronic in their progress; others, again, according as the exciting cause is permanent or temporary, present themselves in the one or in the other of these forms.

17. The most constant local phenomena of inflammation, *redness*, *pain*, *heat*, and *swelling*, exhibit a multitude of shades and varieties in the cutaneous phlegmasiæ, which I shall discuss in detail, when I give the history of each individually.

18. Redness is a constant phenomenon, whether it constitute the most evident character of the inflammation, as in the exanthemata, or is not readily to be appreciated, except before the formation, or after the rupture of vesicles, of bullæ, and of pustules, or after the fall of scabs and scales. The distinguishing character of this redness, slight and fleeting in roseola, bright and flushing in scarlatina, is, that it disappears on pressure, but quickly returns when the pressure is re-

moved. It is only in some cases, forming exceptions, but which occur more frequently than is generally imagined, that the redness does not entirely disappear. A certain quantity of blood has then been effused beneath the skin, which, when the redness goes off, leaves behind it, especially in vesicular, pustular, and bullous inflammation, brownish or yellowish stains, which are obliterated in the course of time.

19. Itching, heat, scalding, burning, tension, gnawing, &c., are so many forms under which the pain of the inflamed skin may show itself. To each of them belong a number of shades, which are characteristic of several varieties of disease; the pruritus, for instance, has particular characters in itch, prurigo, eczema, and urticaria; the sense of heat, sharp in erysipelas, hot and burning in scarlatina, is still more troublesome in hydrargyria. Lastly, if several cutaneous phlegmasiæ are accompanied by violent and intolerable pruritus, others do not commonly excite the slightest sensation of itching; amongst these are the syphilitic eruptions.

20. The inflamed skin no longer communicates the soft and moist sensation of warmth, which is peculiar to the healthy state. An increase of heat is appreciable by the thermometer, in the greater number of acute inflammations, especially in scarlatina and hydrargyria; but is not perceptible in chronic inflammations. With regard to the sensations of the patient, the heat, to him, appears slight, intense, gentle, or pungent and biting, and often much greater than it is in fact.

21. The tumefaction of the skin, very conspicuous in some acute inflammations,—as erysipelas, urticaria, variola, erythema nodosum, anthrax, &c., is little appreciable in others,—as roseola, pityriasis, &c. The apparent tumefaction of the skin, in the greater number of cases, is owing, at least in part, to that of the corresponding subjacent cellular tissue.

22. The functions of the skin are always more or less implicated in acute inflammations of its substance. The *cutaneous perspiration*<sup>2</sup> may be diminished or suspended,—as in the height of the eruption of scarlatina; or augmented, as in the sweating miliaria, (*suette miliaire*); or modified in its sensible and chemical properties. The secretion of the *oily fluid*,<sup>3</sup> which, in health, is poured out upon the surface of the skin, is entirely suspended in the parts affected with squamous inflammation. This want of secretion is especially remarkable in the pityriasis of the hairy scalp, and in the scaly patches of lepra and psoriasis inveterata. The secretion of the *sebaceous* matter is likewise interrupted, under the same conditions; but it is evidently increased in one variety of acne, viz., the punctata; it is, farther, modified in certain impetiginous affections, in which the matter, having more the appearance of honey, or of a thick solution of gum, than of proper pus, distils from the follicles. Lastly, the secretion of the sebaceous substance evidently becomes of a contagious nature in favus.

23. The formation of the epidermis is itself more or less modified in almost all the inflammations, and especially in those that are designated as *scaly*; serous or purulent fluids, following *vesicular* and *pustular* inflammations, are sometimes deposited between this membrane and the corion, or in the cavities of the follicles.

The production of the nails and hair may also present remarkable modifications, which I shall explain when treating of the morbid alterations of these structures.

24. The *absorbing* powers of the skin,<sup>4</sup> and its faculty of disengaging *gaseous fluids*,<sup>5</sup> as phenomena in health and disease, admitted by some observers and denied by others, call for further investigation.

25. GENERAL SYMPTOMS.—Every acute form of inflammation of the skin, that is intense and of some extent, is accompanied by fever, more or less violent in its character; often, too, this fever precedes the heat of surface, and even any alteration in the appearance of the integuments.

<sup>2</sup> Cruikshank (William). Experiments on the insensible perspiration of the human body, showing its affinity to respiration. 8vo. 2d edit. Lond., 1795.—Roth (C.-H.-G.). Diss. de transpiratione cutanea, æquilibrii caloris animalis humani conservationi inserviente, etc. Halæ, 1793.—Stahl (G.-E.). Diss. de transpiratione impeditâ, in-4. Halæ, 1707.

<sup>3</sup> Ludwig et Grutzmacher. De humore cutem inungente, in-4. Lipsiæ, 1784.

<sup>4</sup> Westrumb. Sur la faculté absorbante de la peau. (Journ. hebdomad., t. i. p. 290, and Bulletin des sciences méd. de Ferrussac, t. xix. p. 20.)—Larper. De vicibus insorbente. (Bull. des sciences méd. de Ferr., t. xvii., p. 334.)

<sup>5</sup> Collard de Martigny. Exhalations gazeuses de la peau. (Bull. des sciences méd. de Ferr., t. xxiii., p. 9.)

<sup>1</sup> One of the latest classifications of the diseases of the skin, is to be found in the work of the excellent and very learned writer, Dr. Craigie, entitled, Elements of General and Pathological Anatomy. 8vo., Edinburgh, 1823. It is alluded to by Dr. Rayer in the note under page 17.—R. W.



The precursory symptoms are very remarkable in certain acute inflammations, denominated eruptive fevers by a great many authors, such as rubeola, scarlatina, varicella, variola, miliaria, &c.<sup>1</sup> In these affections, the fever and general symptoms precede, by many days, the morbid appearances of the skin, which, in the interval, is neither painful nor apparently changed in its principal functions. Some authors even think that these febrile symptoms constitute such eruptive diseases much more than the eruption itself; and examples are quoted of variolous, miliary, and other fevers occurring without any eruption. This much, at least, is certain; that the general disturbance of the functions is to be taken into very particular consideration, in appreciating the phenomena of these diseases, and in adopting rules for their treatment. We also observe attacks of erysipelas and urticaria come on without any appreciable cause, after a day or two of fever. The denominations, *erysipelatos* fever, *miliary* fever, &c., used by some authors, indicate certain presumed analogies between these diseases and the eruptive fevers. The fever sometimes ceases, and always declines, with the appearance of the eruption. Several internal inflammations, and particularly anginae of different kinds, are developed in the same manner, after general febrile disturbances of the system. Lastly, several cutaneous affections are preceded by symptoms which are not febrile in their nature: these are pains more or less acute; they occur particularly in herpes zoster and herpes phlyctenodes, and often continue long after the disappearance of the eruption.

26. The time that elapses between the action of the specific causes of variola, scarlatina, rubeola, varicella, and sweating miliaria, and the appearance of the first appreciable phenomena in these diseases, has been entitled the *period of incubation*. Its duration varies with each species of disease. In chronic affections, capable of being transmitted by inoculation, the length of this period varies, not only according to the kind of disease, but also according to the individual infected. I shall have occasion to recur to this fact, when treating of scabies, favus, syphilis, &c.

27. As to the general symptoms which acute inflammations of the skin most usually present, at their acme or characteristic condition, they arise from the affection of one or more organs, and sometimes from that of a particular system according to the species, as is demonstrated by the comparative study of variola, rubeola, scarlatina, &c. The number and severity of these symptoms are not always in the ratio of the intensity of the cutaneous inflammation. This, indeed, in a vast number of cases, is but one among the elements of these diseases, and, very often, one of the very least importance.

The inverse ratio that exists between the urinary secretion and the cutaneous exhalation, is very conspicuous in some inflammations of the skin. Graefe maintains, that the particular odours which in variola and miliaria are disengaged from the skin, coincide with changes in the state of the urine.

28. Chronic inflammations of the skin often supervene without being preceded by the slightest disturbance of the principal functions. These complaints, however, often give rise to a degree of nervous irritability during the day, and to sleeplessness through the night. The irritation caused by prurigo has been seen to induce, not only sleeplessness, but even gradual emaciation of the frame and, finally, death. Several chronic inflammations of the skin, especially those that occur in the genital organs, may excite unwonted venereal desires,<sup>2</sup> and even a sort of satyriasis.<sup>3</sup> This connection of the integuments with the generative functions, observed under other circumstances,<sup>4</sup> occurs only in a very small number of cutaneous diseases.

29. *Complications*.—Other diseases,—amenorrhœa, dysmenorrhœa, &c., are occasionally combined with the invasion of acute and chronic inflammatory affections of the skin. These last may be either the effect or the cause of the first; and it is often difficult to determine which is primitive, which consecutive.

<sup>1</sup> Suasso (D.L.). *Morborem exanthematicorum descriptionis, tabularum formâ ordinatæ, specimen*, etc. in-4. Amstelod.—Chanel (C.f.c.). *An in exanthemate acuto ac febrili morbus sit totus in inflammatione cutis?* In-4. Paris, 1829.—Eichhorn (H.). *Handbuch über die Behandlung und Verhütung der Contagions-fieberhaften Exantheme*, etc. Svo. Berlin, 1831.—(Analyzed in *Gaz. méd.*, 1833, in-4., p. 298.)

<sup>2</sup> "Imò, et vidi in summo pruritu ad crus inter scalpendum in viro sexagenario, magno impetu semen exisse." (Lorry. *De morbis cutaneis*, p. 28.)

<sup>3</sup> Duprest-Rosny. *Diss. sur le satyriasis*, in-8. Paris, an. xii.

<sup>4</sup> Meibomius. *De usu flagrorum in re venerea*. Leidæ, 1629, in-12.

In a certain number of cases, both primary and secondary affections appear to be the consequence of one, and often of the same specific cause,—as in rubeola, scarlatina, &c.

When treating particularly of each form of inflammation of the skin, I shall point out the diseases that oftenest appear accidentally in its course: I may here cite, as examples of these frequent complications, that of scabies with prurigo, of ecthyma with rupia and boils, of eczema with impetigo, of scarlatina with sudamina, &c.

30. When eruptive fevers are complicated together, instead of running through their usual periods, they present remarkable peculiarities. Sometimes one of them suspends its progress, to resume it at the period of convalescence from the other, which follows its course: sometimes, on the contrary, the stages of the intervening affection appear to be accelerated. Certain eruptions are modified in their development and in their appearance, when they are contracted nearly at the same time, as has been seen in some closely approximated or simultaneous cases of inoculation of small-pox and cow-pox in the same individual.

31. To the present time, but a small number of anatomical investigations have been instituted into the diseases of which individuals, attacked with chronic inflammatory affections of the skin, have died. After death, lesions of the lungs, of the organs of digestion, of the uterus, &c., have been observed, in proportions which do not seem to differ from the relative frequency of these morbid alterations, observed under other circumstances and in other subjects. These results will have no real utility, nor ever become the basis of practical inference, until the internal lesions that coincide more frequently with such and such a form of inflammation of the skin than with such another, shall have been ascertained by the examination of an immense number of bodies. It is already ascertained that rupia and lupus often occur along with scrofula; that the impetiginous eczema of the face and hairy scalp is frequently complicated in infants with chronic inflammations of the cæcum and colon, and of the mesenteric and lymphatic glands of the abdomen; that rosacea often coincides with gastro-intestinal inflammatory diseases, &c.

32. I shall bring forward no instance of inflammations of the skin complicated with biliary, mucous, or adynamic fever, the existence of which, as a distinct morbid condition, has not been demonstrated to me by any fact: I shall give a few cases of these phlegmasiæ complicated with *dothinenteritis* or furuncular affection of the bowels, and with intermittent fever, which I have long been accustomed to separate from continued fevers.<sup>5</sup>

33. Intervening diseases may modify cutaneous eruptions in their progress, their colour, their termination, &c. Under the influence of some accidental internal irritation, an eruption that has lasted for several months is sometimes seen fading and entirely disappearing, to be slowly reproduced as soon as convalescence is established. These disappearances of the inflammatory affections of the skin as *effects*, are much more frequent than the same phenomena regarded as *causes*. A patient under my care at La Charité, for a syphilitic affection, having been attacked with pneumonia, the eruption vanished almost immediately, and as quickly showed itself again when the inflammation of the lungs was subdued.

34. Not only may disease of the skin be preceded or accompanied by various other affections, but, among the inflammations of the integuments, several are even very commonly followed by other particular diseases. These consecutive affections, extremely common, and sometimes of great severity after eruptive fevers, are very rare after chronic diseases of the skin. The distension of the veins of the face, in hypertrophy of the nose following rosacea; the baldness consequent on favus; the ugly cicatrices produced by burns; the spots and cicatrices of syphilitic spots,—are all effects of primary, and not of secondary affections.

35. Certain diseases of the skin may alternate<sup>6</sup> with alterations of

<sup>5</sup> Vide *Dict. de Médecine*, Art. *Intermittent*, t. xii.

<sup>6</sup> Novi hominem cui quoties herpes conquiescunt, loties hæmorrhoides erumpunt, largo imbre fluentes et cruciatibus distinguendi. (Lorry. *De morbis cutan.*, p. 303.) —Duo tantùm hic notare suffecerit exempla. Alterum nobilissimæ mulieris quæ scirrhoso tumore ipsum uterum depascenie laborare videbatur. At tumor ille vultu sedato per fluentium ulcerum herpeticorum sorditiem sanabatur. At tumor pessimo percussa consilio, rursus in hepate decubebat, dièndè verò in utero rursus; et eadè si ingentibus vexaretur menstrualibus hæmorrhagiis aut fluore albo mucoso per-



the viscera or of their membranes; a circumstance that has led to the belief that the former are converted into *obstructions* or *infracti-  
tions*. A young man, of twenty, had been ill for two years: at first he suffered with colicky pains and diarrhoea. The pains soon changed their seat, and settled in the stomach. From this time forward, he had great sensibility of the epigastric region, which was increased by the presence of food in the stomach; he had attacks of vomiting which, though they occurred but rarely at first, became at length so incessant, that the patient was reduced to the lowest state of marasmus and debility. After two years of suffering, and the fruitless employment of a variety of remedies, the patient came to Paris to consult Professor Bourdier. His condition was now deplorable; emaciated in the extreme, his strength gone, and the stomach unable to bear even the smallest quantity of broth. M. Bourdier learned from the patient: first, that he had had a considerable boil on the inside of the right thigh, the progress of which was very slow; 2dly, that the colic and diarrhoea had supervened shortly after the cicatrization of this boil; 3dly, that he had been relieved as often as a number of small ulcers had appeared between the toes of each foot; 4thly, that the vomiting had, on the contrary, increased when these healed up. Acting on this information, M. Bourdier ordered a blister to be put on the seat of the old boil, and flour of mustard to be placed between the toes. Twelve hours after the application of these remedies, the vomiting ceased, and the appetite had returned. The blister was kept open, and two months scarcely elapsed before the patient completely recovered.

When any internal inflammation, which has been long stationary, is accidentally increased in intensity, it often causes, or is followed by, the disappearance of cutaneous eruptions, should there happen to be any on the surface at the time.

36. *Anatomy of the Skin*.<sup>2</sup>—The human skin, when studied anatomically, from within outwards, presents, 1st. the *corion*, *dermis*, or *true skin*, the outer surface of which exhibits a vascular net-work and papillae; 2d, a deep *epidermic layer*; 3d, a *pigment*, deposited partly in this membrane, and partly in the epidermis; 4th, the *epidermis*; to these must be added the *sebaceous follicles*, the *nails*, and the *piliferous bulbs*. (a) These elementary parts and appendages

(a) To these several parts should be added, to complete the structure of the skin, the sudorific organs and their ducts, or the sudoriferous glands. They lie deeper in the substance of the dermis than the sebaceous glands, and extend more plentifully beyond into the adipose tissue. They are small, oblong bodies, composed of one or more convoluted tubule, or of a congeries of globular sacs, which open into a common efferent duct, and the latter ascends through the structure of the dermis and epidermis, to terminate by a funnel-shaped and oblique aperture or pore upon the surface of the latter. In most cases they are colourless or almost transparent. These vessels, in the number of their windings, and in their direction through the skin, vary in different parts of the body. In the right hand these spiral tubes are bent from left to right, and on the contrary direction in the left hand.

In anticipation of what may be said of the diseases of the different elements of the skin, it will be sufficient in this place to remark that our knowledge of the morbid states of the apparatus consisting of the sudoriparous glands so recently discovered, must be necessarily very restricted. So far, opportunity has not been allowed to observe positive lesions of tissue; and we can only speak of their deranged functions under the heads of augmented, diminished, and altered secretion. M. Wilson (*Diseases of the Skin*) describes augmentation of secretion under the heads of sudatoria simplex, and sudatoria maligna.

petuo, horumce malorum neutrum experiebatur. (Lorry. De morb. cutan., p. 58.)—Lorry, also, speaks of a youth, labouring under scirrhus obstruction of the spleen, and rosacea of the nose, in whom the cutaneous affection extended as often as, by appropriate remedies, the splenic tumour was lessened. Remedies, however, being laid aside, the spleen regained its former size, and the gutta rosea declined notably, both in intensity and extent.—Op. cit., p. 648.

<sup>1</sup> Bouchard. Essai sur l'emploi des derivatifs externes, &c., p. 56, in-4. Paris, 1816.

<sup>2</sup> Galen has left some remarks on the structure of the skin. The anonymous author of the *Introductio Anatomica*, and, subsequently, Avicenna, first speak of the *panniculus carnosus*. Jul. Casserius observed, that the skin was continued into the nostrils and mouth, and gave a figure of the epidermis, separated from the dermis. Fabricius Hildanus has carefully described the dependencies of the skin in man and animals. Bichat investigated, with wider views, the properties of the skin, epidermis and hair.

of the skin all undergo numerous primary or secondary alterations, in consequence of inflammation.

I shall give the anatomical characters of the exanthemata, of vesicles, of bullae or blebs, of pustules, of tubercles, &c., among the general observations placed at the head of the several orders, or whilst tracing the history of the particular species they include. I restrict myself, here, to some preliminary remarks on the degree in which the different elements of the skin are affected in the various inflammatory diseases to which it is subject.

37. In the major number of cutaneous phlegmasiæ, the *corion*, or at least its deep and fibrous layer, is but little affected. The vascular net-work and the papillae on its external surface, with the sebaceous follicles and hair-bulbs, are the seat of almost all these diseases, if we except furuncle, sty and anthrax, which are developed in the subcutaneous cellular membrane, and interstitial tissue of the corion. Pus is sometimes found in the cellules of this tissue after burns, and those chronic and intense inflammations occasioned by the application of cantharides.

Hypertrophy of the corion may be the consequence of several chronic forms of inflammation,—of lichen, of lepra, &c. This change is more particularly remarkable in Arabian elephantiasis, and the first stage of scirrhus. The corion becomes softened in some deep-seated species of cutaneous inflammation; and this alteration, which is altogether different from gangrene, precedes perforations of the skin whenever these take place.

38. The morbid injection of the vascular rete of the external surface of the corion, is the principal anatomical character of one group of cutaneous inflammatory affections—the exanthemata.—This injected state, also, occurs in a remarkable manner, beneath the epidermis when it is raised by an effusion of serum or pus, in vesicular, bullous and pustular inflammations, and even under the scales of squamous inflammations. It is no less remarkable, also, in tubercular inflammations.

The veins of the rete are sometimes permanently enlarged in old cases of rosacea, in eczema of the lower limbs of aged people, and particularly in some species of bloody nævi.

The frequency of erysipelatous inflammation of the face, has been attributed to the predominance of the rete there; but other parts, whose vascular net-work is very conspicuous, as the glans and the labia pudendi, are rarely attacked by erysipelas. The frequency of this disease in the face must, therefore, be owing to other circumstances.

39. The *papillæ*<sup>3</sup> of the outer surface of the dermis, appear to be especially affected in squamous inflammations. The papillae of the skin sometimes attain an extraordinary size on the surface of blisters

—(Anatomie générale, vol. 4, p. 640, 8vo., Paris.) Gaultier studied analytically, the elements of the skin, which can easily be followed in the integument of the neat's-tongue, and in the human skin hypertrophied (Système cutané de l'homme, 4to. Paris, 1809-1811). Blainville has given a beautiful exposition of the tegumentary apparatus, considered as an organ of defence, of absorption, of secretion, and of sensation, in the different classes of animals (Principes d'anatomie comparée, in-8. Paris, 1822).—Cours de physiologie générale et comparée, 15e et 16e livraison, in-8. Paris, 1829). Chevalier, (Lectures on the general structure of the human body, and on the anatomy and functions of the skin; 8vo. London, 1823;) C. M. André, (De cute humana externâ, Lips., 1805;) J. B. Wilbrand, (Das Hautsystem in allen seinen Verzweigungen; Giessen, 1813, in-12;) Van der Busch, (De integumentis communibus; Leidæ, in-4, 1814;) Joan. Carol. Graeffe, (De cute humana, in-4, Leip., 1824;) Langston Parker, (Mechanism of the skin, Lond. Med. Gaz., vol. vii., p. 353;) and W. Wood. (an Essay on the structure and functions of the skin, 8vo., Edin., 1832;) have made many interesting remarks on the structure and functions of the skin. Schroeter has endeavoured to represent its texture (Das menschliche Gefühl-Organ des Getastes, etc. folio, Leip., 1814). Voigtel (Handbuch der pathologischen Anatomie; 8vo., Halle, 1804; 1st. Band, p. 65), has made some remarks on the alterations of the dermis, of the epidermis, of the sub-cutaneous adipose layer, and of the follicles. Craigie (Elements of general and pathological anatomy, 8vo., Edinb., 1828), has added several anatomical observations on classification. Lastly, to Gendrin (Histoire anatomique des inflammations, in-8., Paris, 1826, t. i., Anat. path. de la peau enflammée, p. 397), we owe many interesting investigations on several forms of inflammation of the skin.

<sup>3</sup> The papillæ discovered by Malpighi, (De Lingua, exercit. in Epist.—De externo tactus organo in Epist. Op. Omn., t. ii.) have been admitted and described by Ruysch, who has figured those of the nipple of the female, of the teat of the whale, and of the tongue of man, (Thesaurus, anat. ii., tab. iv., fig. 1, 4, 6, 7, 8, 9,) by Albinus, (Acad. annot., lib. iii., cap. ix. et xii.) by Hintze, (De papillis cutis tactui inservientibus, Lugd. Bat., 1747,) by Gaultier, (Rech. anat. sur l'organisation de la peau de l'homme, in-4, Paris, 1811,) and by Dutrochet in his Observations sur la structure et la régénération des plumes, avec des considérations sur la composition de la peau des animaux vertébrés. (Journ. de phys., Mai, 1819.—Journ. compl. des sc. méd., t. v., p. 366.)



that have been long kept in a state of suppuration; but this is above all in the Arabian elephantiasis, in syphilitic affections accompanied with morbid growths, in some naevi, in ichthyosis, and in one variety especially of this disease observed in individuals who have been designated *porcupine men*, that the elongation of the papilla becomes so remarkably conspicuous. Some pathologists have supposed that prurigo was caused by inflammation of the papillæ; but this assumption has not been supported by any anatomical facts. The disease occurs most commonly on the outer parts of the thighs or arms, and on the shoulders, situations in which the eye does not detect numerous papillæ, and is never seen attacking the cushions of the fingers, heels, toes, or where they are very conspicuous.

40. The *deep-seated epidermic layer* (*couche albide profonde*, Gaultier), which cannot usually be perceived in the human skin, I have seen very distinctly in some cases of Arabian elephantiasis. It is precisely like the external epidermis. I am not aware whether it undergoes any modification in other cutaneous affections or not.

41. The *pigment or rete-mucosum*<sup>1</sup> is altered in the greater number of cutaneous inflammations; for a certain quantity of blood is almost always deposited beneath the epidermis, in the epidermic layer of the papillæ when it exists, on the surface, or in the substance of the dermis; even the exanthemata sometimes exhibit these bloody suffusions. From the quantity of blood deposited, and the amount of its elements imbibed by the skin, result spots or stains of a brown, livid, coppery, or yellowish-gray colour, &c., which continue for a longer or shorter space of time according to the age and the constitution of the individual affected, the nature of the disease, and the means of cure employed.

42. The *epidermis*<sup>2</sup> undergoes numerous alterations at the decline or during the course of many inflammations of the skin; it becomes dry and brittle, and then it chaps and splits, or is detached from the true skin in the form of bran, scales, or plates, and sometimes in large flaps from regions where it is thicker or stronger, as it is on the soles of the feet, the palms of the hands, the knees, the elbows, &c. Its detachment is rarely followed by the fall of the nails, but most commonly by that of the hair.

The colour of the epidermis may undergo several modifications.—It grows yellowish in some syphilitic affections, black in one variety of pityriasis, of a dull white in lepra, and of a pearly hue in some pityriases of the hairy scalp. The increase or diminution in the thickness, in the transparency, and in the tenacity of the epidermis all furnish important characters in the determination of species.

43. The *sebaceous follicles*<sup>3</sup> are attacked by diseases peculiar to themselves.<sup>4</sup> They become altered in many affections which were primarily unconnected with them. The parts of the skin most frequently inflamed are also those that are most amply provided with follicles. The history of eczema, of impetigo, of favus, of acne, of rosacea, &c., demonstrates how frequently inflammations of the follicles occur, and how various these diseases are in their characters. The follicles of the chin in man are subject to a very intractable species of pustular inflammation—*syccosis menti*. The follicles of the pubes are more rarely affected than those of any other region of the body.

<sup>1</sup> B. S. Albinus. De sede et causâ coloris Æthiopum et ceterorum hominum. Lugd. Batav., 1737, et Annot. acad., lib. i., cap. ii.—Summerring. Ueber die körperliche Verschiedenheit des Negers vom Europäer.—Everard Home. On the black colour of the rete mucosum, (Phil. Trans., 18.)—Heusinger. Recherches sur la production accidentelle du pigment et du carbone dans le corps humain (in German). Eisenach, 1823.—An extract will be found in the Archives gén. de médecine, t. v., p. 290.—Marx. Sur le pigmentum de la peau des nègres (Bullet. des sciences médicales de Ferrussac, t. xvii., p. 322.)—Leidenfrost. Diss. de statu præternaturali succi retis Malpighiani. Duisburg, 1771.

<sup>2</sup> H. Fabricius. De totius animalis integumentis, ac primo de cuticulâ, et iis quæ supra eam sunt; in Oper. omn.—Ludwig. De cuticulâ: Lipsiæ, 1739.—Meckel. Nouv. obs. sur l'épiderme (Mem. de l'académie royale des sciences de Berlin, année 1757).—Monro. De cuticulâ humanâ; in his Works, Edinburgh, 1781.—J. Th. Klincksch et Hermann. De verâ naturâ cuticulæ, ejusque regeneratione. Pragæ, 1775.—B. Mojon. Sull' epidermide, etc. Genoa, 1815.—Chiaje (S.) Osservazioni sulla struttura della epidermide umana. Napoli, 1827.

<sup>3</sup> J. Ch. Reuss (presid. Auentrieth). De glandulis sebaceis. Diss. Tubingæ, 1807.—Weber. Sur les follicules sebacés (Journ. compl., t. xxix., p. 133).—Eichhorn, Sur les excréments de la peau et sur les voies par lesquelles elles s'opèrent, (Bulletin des sciences médicales de Ferrussac, t. xi., p. 15.) has maintained that the sebaceous follicles have no existence as peculiar organs, and that the sebaceous matter of the skin was secreted by the hairy follicles; we see, however, that the follicles of the glands, and those of the skin generally, of many animals, never produce hair.

<sup>4</sup> C. Kæstel. De folliculorum sebaceorum morbis, in-8. Rostock, 1828.

44. The alterations of the *hair-follicles* or *bulbs* will be last described. To the diseases generally known to affect these minute organs, favus must be added.

The hair-bulbs of the genital parts and axillæ are more rarely diseased than those of the face and scalp. In the axilla, especially, the hair-follicles are deeper and larger than anywhere else, and their inflammations are always more than usually severe and rebellious in their nature.

45. I shall, by and by, describe those alterations which the *nails* experience when the skin which they cover is attacked by lepra, eczema, psoriasis, syphilis, &c.

46. The relative frequency with which cutaneous inflammations occur on the right and on the left side of the body, is a subject which, if not very useful, is at least curious. When I treat of zona, icterus, &c., I shall present the remarks of Mehlis on this subject,<sup>5</sup> and point out certain errors into which he has fallen, his calculations not having been made on data sufficiently extensive.

47. Some forms of inflammation are set up indiscriminately on every part of the surface:—such are erythema, ecthyma, and others; but many of the same class of maladies affect certain regions especially: eczema shows itself on the hairy scalp, on the ears, and on the margin of the anus; prurigo affects, in preference, the outer parts of the limbs; lupus attacks the cheeks and alæ of the nose; rosacea, syccosis, and acne, regarded as modifications of the same disease, invade the face, the chin, and the integuments of the trunk; others, again, constantly occupy the whole, or almost the whole, surface of the body at once; such are measles, scarlatina, &c.

48. The *etiology* or doctrine of the causes of cutaneous inflammation, has been the subject of much research. The *roots*, to use an old and characteristic expression, of certain local diseases of the skin, such as warts, follicular tumours, horny appendages, &c., were distinguished at a very early period to be internal. To approach as nearly as possible to a true knowledge of the causes of cutaneous disease in general, it has been found necessary to study not only the nature and the effects of external stimuli on the skin, but, further, the relations of the skin to the principal organs of the economy,<sup>6</sup> and the influence of diseases on affections of the integuments.

49. Thus studied and compared in their causes, their progress, their termination, their treatment, and their nature or mode of existence, inflammations of the skin fall naturally under two categories. Those of the one, essentially local, and produced by external evident causes, are easily and promptly cured; those of the other, developed without any appreciable outward cause, appear linked to morbid states of the system,—to more or less complex conditions of the organization, of which they are only, so to speak, symptomatic expressions; thus we say *scrofulous lupus*, *purpura hemorrhagica*, &c.

50. Natural excretions, or other matters, deposited on the surface of the skin,—the scurf of the hairy scalp, in pityriasis capitis, for example, the matter of the perspiration in intertrigo aurium, the mucous discharge in the same disease of the thighs, the contact and friction of the dress, garters, corsets, &c.,<sup>7</sup> and a multitude of irritating substances, such as mustard, cantharides, tartrate of antimony, Bui-gundy pitch, croton oil, &c., excite particular inflammations, which appear under various forms,—exanthematous, vesicular, or pustular.

51. Many chronic inflammations are caused by want of cleanliness. It was partly to this cause that Willan attributed the great number of cutaneous diseases, observed in London, among the lower classes of society. The frequency of skin complaints, or of itch, at least, among the inhabitants of lower Brittany, is due to the state of filth in which they live, and to the ease with which this disease is communicated. It seems certain that prurigo, and several artificial forms of inflammation, would be less common among the poorer classes, were they not compelled, by necessity, to neglect the use of baths and other similar means of preserving health, which their laborious occupations often render more particularly necessary.

<sup>5</sup> Mehlis (C. F. Ed.). Comment. de morbis hominis dextri et sinistri; 8, 1817. (J. Frank. Delectus opusculorum, vol. i., Novocomi, 1827.)—Cartreau (E. F. G.). De la symétrie dans le corps de l'homme, these, in-4. Paris, 1823.

<sup>6</sup> Lorry. De morbis cutaneis—Art. vi. De sensu cutis ad alias partes relativo; seu cutis cum aliis partibus consensus,—p. 25.

<sup>7</sup> Sauvages numerat *crispelas* in cute nascens a collarium ecclesiasticorum uso. (Lorry. De morbis cutan., p. 6\*)



The subject of *cosmetics*,<sup>1</sup> their uses and abuses, &c., ought to be resumed in another spirit, and presented in a more scientific shape, and in better keeping with the present state of knowledge, than has hitherto been done.

52. *Too high a temperature* of the atmosphere is the evident cause of several forms of inflammation of the skin; the eczema solare, and lichen tropicus, may be cited as examples. The same cause often aggravates chronic inflammations, such as rosacea and lichen facialis, or increases the itching occasioned by some others, as lichen simplex, scabies, &c. Moisture and cold combined, cause a particular inflammation of the skin of the hands and feet, called chilblain.

Exposure to cold hastens the formation of the wheals in urticaria, and favours the development of the Arabian elephantiasis in Egypt and Barbadoes.

53. The influence of electricity is little known; all we are certain of is that the electric spark will produce indelible stains of the skin.

54. Certain inflammations occasionally act as direct causes of some others. It is thus that small-pox and measles cause the development of the boils and ethyma so often observed in convalescence from these diseases.

55. Many particular modifications and affections of the digestive functions exert an influence, badly defined indeed, and certainly exaggerated, yet established by incontestable facts, on the development of certain diseases of the skin.<sup>2</sup> Who has not seen the brow, nose, cheeks and eyelids of young people, habitually temperate, become covered with spots and pimples, after two or three days of indulgence in the pleasures of the table? Let but habitual irregularity of life follow such accidental excesses, and a chronic inflammation of some sort will almost certainly be established in the face or some other region of the body. It is also known that drunkards are so much the more subject to gutta rosea, as their favourite beverage is more strongly charged with spirit.

56. The influence of salted and highly seasoned food on the development of chronic inflammation of the skin, has long been known, and never disputed. Rice, oysters, mussels, lobsters, shrimps, &c., and different kinds of fish, sometimes also cause exanthematous eruptions.<sup>3</sup>

57. Lorry has mentioned a similar effect produced by certain medicines. "Every time," says he, "that I have had occasion to prescribe acrid or volatile spirits (esprits âcres ou volatiles) to some of my patients, small itchy non-critical rashes, occasionally containing serum, have come out on their skin." I have, myself, seen eruptions produced by the essential oil of turpentine, by cubeb, pepper, belladonna, &c. Fourcroy gives, as one of the signs of poisoning by nitric acid, an eruption of pustules analogous to those of the small-pox. Hemlock taken into the stomach sometimes causes stains of the skin, especially of the legs and thighs.

The process of dentition in children often gives rise to the development of erythema and strophulus, vulgarly called tooth or teething rashes. Lastly, many cutaneous inflammations are preceded by inappetence, bitter taste of the mouth, nausea, sometimes by actual vomiting, and other functional disorders of the digestive organs.

58. From Galen downwards, a great number of writers have regarded the major part of the chronic affections of the integuments as *bilious*.<sup>4</sup> The frequency of skin diseases in infancy, seemed to be

explained by the remarkable development of the liver. Pujol quotes the case of a dropsical old maid, who had suffered from obstruction of this organ during ten years, and to which there succeeded a humid and crusted tetter on the thighs and arms. A sister-in-law of Pujol, who was attacked with a humid tetter of the ears, suffered afterwards from an hepatic affection. Lieutaud assures us anatomical investigation has satisfied him that obstinate eruptions of the skin, as well as other chronic diseases, have often been owing to some derangement of the liver; Lorry maintains that altered bile produces pruriginous pustules, carbuncles, &c.: lastly, according to Pujol, we are to conclude that a disease of the skin depends on a change of the bile, whenever the malady has come on in a bilious subject without evident cause, or when it has been preceded by the suppression of an hemorrhoidal flux, by a bilious fever, by jaundice, by hepatic colic, by obstinate intermittent fever, or when it has originated under the prolonged influence of a stimulating or heating regimen. Darwin holds that acne is connected with derangement of the primæ viæ; and Mr. Plumbe has grouped together several diseases which he conceives to be generally symptomatic of a deranged condition of the digestive organs. Barbette has, with good reason, denied that the liver and the bile exert so great an influence on the production of chronic inflammation of the skin: and, in fact, I have myself, repeatedly, seen not only diseases of the biliary apparatus without any eruption on the surface of the body, but in a multitude of cases of cutaneous affections, I have found it impossible, with all my care, to discover any trace either of antecedent or concomitant lesion of the liver or of the parts connected with it. Lastly, in warm countries, where disorders of the biliary apparatus are so frequent, the coincidence of diseases of the skin with affections of the liver, has never been particularly dwelt upon by authors.

59. A few imperfectly recorded cases have also led some to believe that diseases of the spleen were occasionally reflected upon the integuments.<sup>5</sup> The results of my own researches, more numerous and more conclusive than those of Valli, are at variance with this assertion.

60. In individuals attacked with chronic inflammation of the skin, the digestive apparatus is very commonly perfectly healthy; and were it even shown that affections of the stomach, of the liver, or of the spleen, were generally found accompanying skin complaints, it would not be, on that account, quite fair to infer that the latter were symptomatic of the former, for they might both be effects of the same cause.

To conclude this subject, then, it is undeniable that certain articles of food and of medicine taken into the stomach, and some gastrointestinal affections, do cause eruptions of various kinds on the skin: but it is not less certain, that the Galenists of old, and, in later days, the disciples of the physiological school,<sup>6</sup> have exaggerated the importance of these causes; the former in attributing to changes in the bile, the latter to irritation in the stomach and bowels, results over which it is impossible to prove that the biliary or digestive apparatus habitually exercises any influence.

61. A great number of cutaneous inflammations may be produced by mental labour, by excessive watching, by rooted sorrow or by any other act or circumstance that modifies the state of the nervous system.<sup>7</sup> The misery and gloom that pervade the northern parts of Italy, have been assigned as a cause of the pellagra so common there. Of five hundred insane patients in the hospital at Milan, Dr. Holland reckoned that two-thirds were affected with pellagra. Numerous cases of meladermia, eczema, zona, pemphigus, erysipelas, and urticaria, which I have collected, prove that the influence of the nervous sys-

<sup>1</sup> Mercurialis, lib. de coratione, in-4. Venet., 1623.—Fallopian De decoratione; in Oper.—Banneau, histoire naturelle de la peau et de ses rapports avec la santé et la beauté du corps, in-8. Paris, 1803.—Trommsdorff, Kalopistria, oder die Kunst der Toilette für die elegante Welt. Erfurt, 1804.—Chaaals-des-étangs. Considérat. anat. et physiol. sur la peau, suivies d'un précis sur les cosmétiques, in-4. Paris, 1816.

<sup>2</sup> Lorry. De morbis cutaneis, p. 39.—Genesis efflorescentiarum in sordibus systematis gastrici quæri ferè semper debere, multorum atque etiam nostris observationibus convictum videtur (Stoll, Rat. Med., in-8, part i., p. 28).—Wetli. Exanthematum fons abdominalis, in-4. Götting.—De Nenfville. Versuch und Grundriss einer pract. Abhandl. von d. Sympathie des Verdauungssystems. Göttingen, 1788.—Tissot; Œuvres, t. xii., p. 71.—Lorry has seen: Stupendous in cute tumores assurgere nobili femina, quoties illa vel tantillum oryzae assumeret (De morb. cutan., p. 27).—Encyclopédie méthodique, Art. acide nitrique.—Alibert. Thérapeutique, 5e édit., tom. ii., p. 427.

<sup>3</sup> I know a family, one member of which suffers certainly from nettle-rash, if he touches any of the lobster tribe, or vinegar, or acid fruits; another suffers sadly from opium, and the tinctures of the druggists' shops; the smallest quantity of any of these causes the skin to tingle, and to throw out an abundant crop of papule, the itching from which is unbearable.—R. W.

<sup>4</sup> The Royal Society of Medicine of Paris proposed this as the subject of a prize in

1783. The memoir of Pujol, which was held the best of those submitted, is truly poor in facts, and contains a mass of ill-supported notions.—Diss. sur les maladies de la peau relativement à l'état du foie, in Œuvres de Pujol, tom. ii., p. 99. Paris, 1823.—Galen. Methodus medendi, lib. iv., c. 17 (Herpetes biliosus procreat succus). De tumoribus præternaturalibus, cap. ix. (Herpes).—Ludwig. Adversar. med. pract., vol. i., p. 202.—Lieutaud, Précis de médecine pratique, t. ii., p. 282.—Lorry. De morbis cutaneis, pp. 51 and 52.—Barbette Opera omnia, cap. De herpete.

<sup>5</sup> Valli. Saggio sopra diverse malattie cutanee.

<sup>6</sup> The school of Broussais.

<sup>7</sup> Cum inter aquæ purissimæ potores viderim non unum qui dilutâ stomachali saburrâ, sese pustulis ad frontem indignabatur inter vini immoderatos bibaces recenseri, quorum in numero juniorem monachum studiis deditum, meri potu sanatum vidi: medicumque nimio perè meditationi indulgentem, qui aquâ ardorem laboribus innatum temperare dum studebat, faciem fœdis pustulis deturpatam habebat, hunc remissis studiis, et meri potu nitorem cutis recuperasse vidi. (Lorry. De morb. cutaneis, p. 64.)



tem on the development of these diseases is incontestable. It is well known that the insane are very subject to cutaneous eruptions and to erysipelas.

62. The influence of very energetic *muscular exertions*<sup>1</sup> on the development of diseases of the skin, has been observed by Lorry. A state of habitual rest and inaction is often accompanied by great beauty and whiteness of skin; and I have ascertained the beneficial influence which is possessed by the relaxation of the muscular system on the progress of diseases of the skin among the labourers and handicraftsmen received into our hospital.

63. The opinion very generally diffused among persons labouring under chronic affections of the skin, of their diseases being kept up by some alterations of the blood,<sup>2</sup> by some morbid state of the humours, is strengthened by sundry observations. I have noticed that the blood was buffy in a great many of these cases, even when there was no fever, and no appreciable disorder in any of the principal functions. In anthraxion or malignant pustule, in small-pox and measles, the blood is certainly charged with some principle of contagion. Pujol assures us that the serum of the blood is bilious in several cutaneous diseases. It is very probable that certain agents only exert their influence on the integuments after having been carried into the torrent of the circulation. The inflammation of the skin in the mercurial disease, and the leaden hue that follows the long-continued internal use of the nitrate of silver, are examples of the effects of such absorptions. As to the *alterations of the lymph*, and the *acrimony of the serum*, the *mucus* and the *humours*, which used to be universally admitted, almost all that has been written and taught on the subject, is hypothetical. I except those experiments that have been made on the contagious qualities of the fluids or matters of cow-pox, small-pox, scabies, of the nasal mucus in measles, &c. The appearance of many of these affections without appreciable cause, their hereditary properties, their frequent recurrence and so forth, are so many circumstances which the alteration of the blood, were it demonstrated, would render less obscure.

64. The state of *general plethora*, observed in individuals of a sanguine temperament, whose skin is habitually ruddy, is more rarely the cause of cutaneous inflammation than the *local plethora*, produced by the stasis, or habitual or accidental allux of a certain quantity of blood to any particular region of the surface of the body.

65. The relations between the skin and the organs of respiration, have been well observed by Meckel.<sup>3</sup> Our knowledge, however, of the influence exerted by diseases of the organs of respiration on those of the skin, is confined to a very scanty number of facts. Alibert has related two cases of eczema alternating with paroxysms of asthma. Hooping-cough is known to be occasionally followed by cutaneous eruptions, and phthisis often causes exhausting epidrosis, and occasionally severe sudamina.

66. I have seen some chronic inflammations of the skin appearing only during pregnancy, such as eczema impetiginodes and prurigo, and others ceasing, or at all events, declining sensibly in their violence during menstruation, pregnancy and nursing. In these cases, however, the diseases showed themselves anew on occasion of the suppression of the menses, or at the natural period of the cessation of this flux. I have observed eczema, and other chronic inflammations of the skin unexpectedly invading females who had been compelled by the death of their child or nursing, to give up nursing suddenly; these are the *milk eruptions* (*dartres lacteuses*) of certain writers. Similar cases have long been familiar in practice.<sup>4</sup>

67. Some authors tell us that the abuse of the sexual propensity may induce eruptions on the skin: (a) Lorry thinks they are more fre-

quently the effect of an opposite cause. "Certè," says he, "utriusque sexús evolutione factâ, si castam instituerint vitam erumpit vulgo ingens pustularum conglomerata congeries." Young girls who suffer from these eruptions, and particularly from acne, are very often attacked with rosacea at a later period of life.

68. Lorry informs us that pruriginous eruptions are sometimes seen to break out in individuals attacked with nephritis.<sup>5</sup> Although my attention has been particularly turned to diseases of the kidneys for some years, I have not met with any case confirmatory of this assertion.

69. Not only do certain *diatheses* modify the characters of some cutaneous diseases, but they eminently predispose to the development of several of them. I have observed that scrofulous children, with thick lips, and heads of the shape of a calabash, were often affected with eczema impetiginodes of the face and hairy scalp, during the course of the first dentition. They are sometimes attacked with phagedenic affections (*dartres rongeantes*) of a very obstinate character, at the age of seven years, and about the period of puberty.

70. Among the causes of skin diseases, Galen mentions the *arthritic virus*; Ludwig<sup>6</sup> points to the same source, and Lorry tells us that in families where the gout was hereditary, those individuals who escaped the disease, were subject to tettery eruptions. Pouteau, also, speaks of the influence of rheumatism in the development of cutaneous diseases. I am, myself, satisfied of the frequent alliance of diseases of the skin (*dartres*) with gout and rheumatism; I have seen these affections disappear suddenly, without any obvious cause, and the patients become the victims of the most violent pains in the articulations.

71. The hereditary nature of a great number of diseases, and particularly of many cutaneous affections, is one of the best established facts in pathology. It often follows the law of resemblance, and sometimes that of sex.

72. Some individuals, free from hereditary diseases, and apparently of a good constitution, are yet so subject to certain kinds of cutaneous inflammation, that Hufeland<sup>8</sup> has seen fit to designate this condition by the title of *Constitutio psorica*, a denomination for which Jos. Frank has substituted that of *Constitutio impetiginosa*. I have myself given my advice to a great many persons in whom eczema, psoriasis, lichen, &c., appeared to be the effect of a constitutional predisposition which was very difficult of removal, and which tended continually to recur, independently of any accidental or other appreciable cause.

73. Several inflammatory affections of the skin may be congenital (erysipelas, variola, pemphigus); others appear especially in infancy (strophulus, pemphigus *infantil*, roseola *infantil*, measles, favus, &c.), and others again are more commonly met with in old age (prurigo *senilis*, pemphigus *pruriginosus*, and so forth.)

74. According to Alibert, scavengers, and those who live habitually in air loaded with sulphurous vapours, are rarely affected with chronic inflammations of the skin.<sup>9</sup> Some have also fancied that workers in charcoal, and those employed in preparing plumbago or black-lead were cured of the cutaneous diseases with which they happened to become affected, by the mere influence of their occupations. I have myself met with too many exceptions to these notions to have any doubts of their inaccuracy. Artificial vesicular and papular eruptions have been described under the name of *grocer's itch*, and *baker's itch*, which are either the consequences of local stimulants, or true eczemas happening in persons exercising these trades. Hydrargyria has been observed among the labourers in quicksilver mines. The trades that demand great muscular exertion and require the person to be exposed to high temperatures, render those that exercise them liable to sudden relapses of such complaints as eczema, lichen, rosacea, &c., a few days after apparent recovery from these affections.

(a) They are a common effect of masturbation.

<sup>1</sup> Undè qui nimio motui, præsertim antè ætatem maturam indulgent, vultu varicoso et pustulosâ facie incedunt notabiles, si præsertim latet intus acre superfluum (Lorry. De morb. cutan., p. 43).

<sup>2</sup> J. F. Dieffenbach. Recherches physiologiques sur la transfusion du sang d'un chat lépreux, du sang d'un cheval atteint de farcin, etc. (Journ. compl. des sc. méd., tom. xxxiv., p. 143.)—Vide the art. rubeola, variola, icterus, anthracion, purpura, etc.

<sup>3</sup> Meckel. Diss. Pulmonum cum cute commercium illustrans. Halæ, 1769.

<sup>4</sup> Gilbert. Advers. pract., p. 26-7 (Suppressio menstruarum herpetum causa).—<sup>5</sup> Undè fit à menstruis delutescentibus dimidia feminarum pars morbis afficiatur cutaneis, et eò magis rebellibus, quò cutis ipsis magis antea nituerit (Lorry. De morb.

cut., p. 71.)—Dantur etiam mulieres quibus, dum tardius erumpunt menses, furfura eminent similia, cessantia simul ac copiosius illi effluerint. (Lorry, p. 93.)

<sup>6</sup> Lorry. De morb. cutan., p. 45.

<sup>7</sup> Nec novum et inobservatum in nephritide, quoties calculus pungit renes, et ureterum substantiam, pustulæ prurientes ad cutem oriantur. (Lorry, Op. cit., p. 65.)

<sup>8</sup> Ludwig. Advers. de morb. arthrit. evolut., t. iii., p. 25.—Lorry. De morb. cutan., p. 64.—Pouteau. Œuvres posthumes.

<sup>9</sup> Hufeland. Journal der praktischen Heilkunde. 21. B. 4. St. S. 14.

<sup>10</sup> Lorry was of a different opinion: "Sæpè herpetibus aut sordibus cutis morbosus produendis fuit satis vicinia latrinarum. (Lorry. De morb. cutan., p. 35.)



75. The influences of *local situation*, of *climate* and of *season*, more remarkable than those exerted by *trades* or *professions*, cause varieties in cutaneous affections which call for attention, and so modify the bodily organization, as to render it more obnoxious, or less liable to be attacked by one or another of these diseases. A multitude of denominations, such as pemphigus of *India*, of the *Brazils*, and of *Switzerland*; tropical lichen, lepra of the *Arabians*, lepra of the *Greeks*, and lepra of the *Jews*; sweating disease of *Picardy*; malignant pustule of *Burgundy* and *Persian* fire; summer roseola, autumnal roseola, &c., show that this influence had been noted, and, perhaps, even exaggerated by pathologists. Several diseases are, indeed, observed almost exclusively in certain countries—pellagra in the Milanese, the Aleppo pustule in Syria, plica in Poland, and so on.

It would be both a curious and an interesting subject of investigation to determine the relative degrees of frequency of inflammatory affections of the skin, and of their different species according to *climate* and *local situation*. Observations on this subject at the present time are too scanty to form the basis of any comparative inquiry of the least importance.<sup>1</sup> The most contradictory conclusions would evidently follow from inquiries commenced with insufficient data.

76. With this study of the influence of local situation and climate, that of *endemic* cutaneous affections, such as sweating miliaria, anthracion or malignant pustule, plica, pellagra, &c., is naturally connected. I have myself proved that sweating miliaria was endemic in moist and shady places: and statistical accounts of several other diseases of the skin have been begun, and ought by all means to be continued.

77. As to those cutaneous diseases which were formerly epidemical, but which are now no longer so, such as Greek elephantiasis in the middle ages, and syphilitic affections towards the end of the 15th and the beginning of the 16th centuries, their mode of attack and the causes of their evolution, are as unknown to us as those of the small-pox, measles, scarlatina and other epidemics which we, in our own day, see attacking communities at frequently recurring intervals. It is impossible to say why some diseases, after having had the epidemic character at one time, should have lost it at another, whilst certain others have constantly preserved this feature.

78. The history of *medical constitutions*, as regards inflammatory affections of the skin, is exceedingly incomplete. It seems demonstrated, however, that erysipelas frequently requires particular methods of treatment according to the prevailing epidemic constitution; that roseola, rubeola, scarlatina, &c., have occasionally a character of mildness, or of malignancy, which becomes a distinguishing feature in different epidemic invasions of these diseases. It is wrong to question the accuracy of these circumstances; but it is no less erroneous to attempt to see throughout each year, and even each quarter of the year, a common character in the cause and progress, of many diseases that are essentially different; and it is with less reason still, that only one mode of treatment for the whole of these various affections has been recommended.

79. Several acute inflammations (variola, vaccinia, &c.), and some chronic forms of skin disease (scabies, favus, &c.), are contagious. These affections are transmitted by means of particular agents, known under the name of virus, miasm, &c. The human subject is in general only once affected with small-pox, measles, and scarlet fever. But one attack of scabies, of favus, or of syphilis does not give security against a second. Scabies, which is especially contagious by contact, cannot be communicated by inoculation; the vaccine pock, transmissible by inoculation, is not so by simple contact, nor by its matter being rubbed upon the skin. The number of diseases of the skin, capable of being transmitted by one or other of these modes of contagion, is not yet satisfactorily ascertained.<sup>2</sup> "I once saw,"

says Pujol, "a dentist labouring under a violent eruption (eczema?), of the right hand, infect, in one day, the faces of a great number of pupils in the royal military school of Sôreze. The eruption appeared on the faces of the boys four or five days after the contact of the dentist's hand."

80. *Diagnosis.* Inflammatory affections of the skin, generally considered, are distinct from hemorrhagic affections of the same tissue. In these last, the attendant redness does not disappear on pressure, neither is it accompanied by heat, and it is most commonly free from all morbid sensations. Moreover, desquamation of the cuticle or some accidental secretion is an almost invariable consequence of inflammation; neither of which circumstances is perceived in hemorrhagic affections, the red spots of these passing successively through shades of a greenish and brightish yellow as they disappear.

Whenever there is a production of squamæ or of furfuræ, or any accidental secretion, inflammation is no longer liable to be confounded with simple congestion. There is never any real difficulty except when the point to be determined is, whether certain congestions with morbid heat, sometimes observed after violent emotions of the mind, or at the period of menstruation in women in whom this function is performed with difficulty, are the first appearances of an erysipelas or not. And we observe in fact, that if the congestion but continue, inflammation will very speedily take its place.

81. The determination of species seldom presents any serious difficulty when the disease possesses its essential characters, when it has reached its acme, or has passed through one or more of its stages.

Various acute inflammations, and eruptive fevers in particular, sometimes exhibit, on their invasion, none but equivocal characters, —nothing beyond general and ill-defined disturbance: at a later period, and towards their decline, these diseases only exhibit features more or less modified, and occasionally so much altered, that these afford us no assistance in our diagnosis, unless compared and contrasted with antecedent phenomena.

In a given case, it is necessary first to inquire what the cause of the disease may have been; then, by attentive examination, to ascertain the form to which the eruption belongs; that is to say, whether it be exanthematous, bullous, vesicular, pustular, and so on. There remains no more to be done but to compare the symptoms and the progress of the species under review, with those of the phlegmasiæ, which present themselves under the same generic aspect.

82. The diagnosis may be rendered difficult in a greater or less degree, according as the primitive form of the inflammation remains unchanged or is much altered, as it is destroyed or replaced by new and consecutive alterations; lastly, as the disease is simple, or complicated with other inflammations of the skin of the same, or of different elementary forms. An attentive examination of consecutive alterations (scabs, ulcers, scales, cicatrices), sometimes of itself, and without any other hint, leads to a knowledge of the nature of the primary lesions, which are, moreover, often to be discovered with all their peculiar characters in the immediate vicinity of those points of the skin which were first affected. When it happens that several forms are conjoined in the same situation, or in the same individual, there is always found one predominating, to which the others, determined by way of analysis, must be attached as adventitious, and be held as constituting *complications*.

83. Inflammatory affections of the skin being sometimes associated with diseases of the mucous membranes of the viscera, or of the parts connected with them, the presence or absence of such affections, together with the apparent causes of their origin, require to be noted in order to render the diagnosis complete.

84. *Prognosis.* There are no grounds upon which the prognosis can be founded save a precise knowledge of the natural progress and terminations of acute and chronic inflammations of the skin, the degree of efficacy of the means employed in their treatment, the circumstances that may hasten and complete, or that may oppose and prevent their cure, such as the appearance of the menstrual flux in young women arrived at puberty, its near cessation in females who are approaching the critical period, &c.

In the majority of acute characteristic inflammatory affections, especially in simple eruptive fevers, the advance, the periods, the phenomena, the duration of the disease,—all may be calculated and

<sup>1</sup> Willan and Bateman on the diseases of the skin in London. (Willan. Reports on diseases in London, in-12, 1801.—Bateman. Reports on the diseases of London, in-8. London, 1819.)—On diseases of the skin in Dublin. (Med. and Surg. Journ., Edinb., xxxiv., p. 99.)—Segond. Maladies de la peau à Cayenne (Journ. hebdomadaire, t. iv., p. 434).—According to Lorry: "Obnoxii sunt morbis cutaneis, Britones, Picardi, Flandri, Batavi." (De morb. cut., p. 34.) M. Richerand, on the contrary, thinks that the Dutch (Bataves) are very subject to diseases of the urinary organs, and suffer but rarely from affections of the skin.—Nouv. élém. de physiol., 10e ed. Paris, 1833, tom. ii., p. 152.

<sup>2</sup> Adams. Observations on morbid poisons, chronic and acute, 4to. London, 1807.



predicted with the greatest certainty; in acute inflammations, however, of an anomalous character, and complicated with other affections of a more or less serious nature, there is no longer any rule for their progress, nor elements existing for the calculation of their issues.

85. Our prognosis must also be modified according to the age of the subject. In old people chronic inflammations of the skin that are independent of external causes ought often to be respected; they may sometimes be moderated, they ought seldom to be cured. In those of adult age, less reserve is necessary, and the prognosis is more favourable. In childhood, the greater number of chronic inflammations of the skin, except favus, lupus, and the itch, run their course, and get well spontaneously, after a longer or shorter lapse of time; at this period of life, skin complaints appear often to be the very reverse of prejudicial.

86. As to hereditary affections, those especially that depend on the scrofulous or arthritic diathesis, are necessarily obstinate and more difficult to cure than the same diseases occurring under other circumstances.

Every form of artificial inflammation whatever is easily, speedily, and often spontaneously cured.

87. Acute and chronic inflammations of the skin are sometimes salutary. The appearance of an exanthematous eruption may put an end to angina,<sup>1</sup> and abdominal infarctions (*engorgements*), to pulmonary inflammations, and wandering pains; many diseases of the skin itself have been seen arrested and cured by an attack of erysipelas.<sup>2</sup> This form of exanthema, occurring on the thorax of a woman attacked with very severe puerperal peritonitis, caused the cessation of this serious disease. I have often remarked an eruption of furuncles in adults, and of eczema impetiginodes in children, happen at the time all the symptoms of an internal inflammatory affection disappeared. I have also seen eruptions of ecthyma occur during convalescence from several acute diseases. Boils are often critical in insanity.<sup>3</sup> Pujol has seen hypochondria vanish with the appearance of furfuraceous eruptions over the whole body. A child of a year old, after having exhibited all the symptoms of meningitis, sank into coma, the sutures separated, and the head became deformed. Dr. Gall, who saw this infant, decided that she had hydrocephalus, and pronounced an unfavourable prognosis. Derivatives to the intestinal canal had been unavailing; the size of the head was increasing; the child was pale and weak; the extremities were infiltrated, when a general scabby eruption appeared, and decided its fate; the fever ceased; the colour, which had been that of yellow wax, came again, and the child by degrees recovered a state of perfect health.<sup>4</sup> The head, though still somewhat misshapen, is much less disproportioned than it was. The child, now ten years of age, is robust, and possessed of all the physical powers of the strongest children at this age; but the intellect appears to be extremely moderate. P. Frank quotes a case of inflammation of the brain, favourably terminated by an attack of erysipelas.<sup>5</sup> Rosen and Mead give instances of intermitting fevers cured by the appearance of small-pox. Prof. Andral cites a case of very severe, and almost desperate pneumonia, the symptoms of which vanished as by enchantment on the appearance of a variolous eruption. M. Brachet has seen a case of phthisis arrested by the intervention of small-pox.<sup>6</sup> I have myself seen, in the person of a young magistrate, a bronchial affection, which I regarded as complicated with tubercles, happily terminate after the spontaneous eruption of an eczema on both forearms. A mass of observations on the good effects of the vaccine pustule in a great number of diseases has been laid before the public; and whilst it must be allowed that these results are not without a tinge of exaggeration, it appears certain that this eruption has several times proved the means of giving a favourable modification to the progress of certain chronic affections. It is on this account that every form of cutaneous inflammation supervening in the course, or during the decline of an internal disease, ought, in general, to be respected, if

not too intense, and if the internal malady advance towards its termination, or become less severe in proportion as the disease of the integuments increases in extent, or runs through its periods.

88. The utility of those *artificial inflammations*<sup>7</sup> which the practitioner is every day in the habit of exciting and keeping up, over certain regions of the body, is based on these and similar observations; they were successfully employed by Fournet in angina (faucium?), by Goodwin, in angina pectoris, by Jenner, in various forms of pulmonary catarrh, and there is, perhaps, no affection, either acute or chronic, in which I have not myself tried them with various measures of advantage.

89. Analogous observations have led others to inoculate scabies, and other contagious diseases of the skin.<sup>8</sup> Dr. Lhomme recovered a child which had fallen into a state of emaciation, after an attack of enteritis, by inoculating it with *tinea*. In such cases it has always appeared to me preferable to have recourse to some artificial eruption, than to the inoculation of a disease disgusting in itself, and very often difficult of cure.

90. In other circumstances, far from being salutary, the occurrence of any form of cutaneous inflammation is prejudicial. Measles sometimes hasten the progress of tubercles of the lungs; repeated attacks of erysipelas aggravate the Arabian elephantiasis; eczema of the legs induces the ulceration of varices, &c. There are cases again in which it is impossible to determine whether an eruption shall be advantageous or hurtful. M. Calmeil, who has paid particular attention to the development of diseases of the skin among the insane, was unable to come to any conclusion in regard to the measure in which he conceived they might prove beneficial, or the contrary.<sup>9</sup>

91. The repulsion of acute inflammations of the skin is more commonly attended by grave consequences in measles and scarlet fever than in any of the other eruptive diseases. Not only is it necessary for us to be on our guard against the fatal effects of such retrocessions of these eruptive fevers, but farther to provide against those which proceed from the sudden disappearance of certain chronic inflammations, as of lichen, eczema, and impetigo. I shall have occasion to quote instances, in illustration, in regard to each of these diseases.

92. The number of cases that have been witnessed, in which the disappearance of cutaneous affections coincided with the development, or accelerated progress of an internal inflammatory disease, have made many afraid to attempt their treatment, or to desire their cure.<sup>10</sup> When there exists at the same time, in the same individual, two affections, one of which is internal, the other external, it seems improper to attempt to combat the latter by any active means.

In academical collections, instances may be found recorded of diseases of the digestive organs following the disappearance of tetter or tincas (*dartres* ou *teignes*). These cases, however, rarely occur, and seem often little conclusive. The numerous inquiries that have been instituted in later times in regard to diseases of the stomach, of the intestinal canal, and of the parts connected with these, have added but little to the earlier observations we possess; their causes have too frequently been overlooked, or passed by in silence. Nevertheless, the case related by M. Bouchard deserved to be quoted (35.).

93. Several cases tend to show that the suppression of an eruption or of a scabies may occasion epilepsy,<sup>11</sup> insanity, and other cerebral affections. In the year 1785, at Bassenheim, on the left bank of the Rhine, a corporal, about 21 years of age, of a spare and bilious temperament, labouring under a severe tettery affection (*une dartre vive*), about four inches in diameter, situated on the fore and upper part of the right thigh, was received into hospital. The disease extended over a small part of the scrotum, and caused violent itching

<sup>7</sup> Jenner. On the influence of artificial eruptions in certain diseases, &c. 4to. London, 1822.

<sup>8</sup> Storr. Diss. de efficaciâ scabiei in gravioribus quibusdam morbis. Tub., 1781.—Alibert. Précis th. et pr. sur les maladies de la peau, in-8. tom. i., p. 52.

<sup>9</sup> Dict. de médecine, en 21 vol., t. ii., p. 189.—Maladies des aliénés.

<sup>10</sup> Chaussier. An herpes in quocumque casu curandi? Monspel. 1785.—Raymond. Des maladies qu'il est dangereux de guérir, in-8., 1816.—Darigues. Maladies de la peau qu'il convient d'entretenir, thes. Paris, an xiii.—Philippe Boyer. Propositions de médecine et de chirurgie. Paris, 1825, pp. 11 and 15.

<sup>11</sup> Schenk, lib. i. De Epilepsiâ, Obs. 16.—Rochard (Journal de Médecine, t. xxv., p. 46). Esquirol. Art. Folie, Dict. des Sc. médic.—Gilbert. Adversar. practic. pr., p. 195. —Ephem. nat. cur. Dec. ij., Obs. 89.—Ann. v. Obs. 224.

<sup>1</sup> Büchner. Diss. de angina exanthematum eruptione solvendâ. Hals., 1763.

<sup>2</sup> Vanvelsuer (C. M.). Diss. sur divers points de l'art de guérir, in-4. Paris, 1821.

<sup>3</sup> Sabatier. Propos. sur l'érysipèle, in-4. Paris, 1-23.

<sup>4</sup> Esquirol. Art. Folie, Dict. des sciences médicales.

<sup>5</sup> Guersent. Dict. méd., 21 vol., 1re édit., tom. xi., p. 315.

<sup>6</sup> De cur. hom. a. morbis., lib. iii., p. 152.

<sup>7</sup> Gazette médicale, 1-33, in-4., p. 274.



there. M. Bouillaud, chief surgeon of the hospital, employed a palliative and cautious treatment in the first instance; but, by and by, yielding to the importunities of the patient, who complained of the intolerable pruritus of the affected part which prevented all sleep, he gave his consent to the application of compresses, dipped in vinegar and water, to the seat of the disease. His surprise was great when the next day he found this man in a deplorable condition. The eruption had disappeared from the limb, but a state of somnolence, attended with stertorous breathing and complete absence of sensation and voluntary motion, supervened immediately afterwards. Every means was tried to bring back the disease; blisters were applied to the spot first affected, and measures calculated to subdue this apoplectic metastasis were exhausted in vain. The cerebral disease continued to advance unchecked, and the patient died on the third day. No examination was made of the body.<sup>1</sup>

Amaurosis<sup>2</sup> and convulsions,<sup>3</sup> especially in young children, have also sometimes been produced by the suppression of acute or chronic inflammatory affections of the skin. It is very possible, certainly, that effects have been ascribed to the repercussion of skin diseases, of which they were totally innocent; but when such accidents occur, as in the preceding case, almost simultaneously with the disappearance of the skin disease, they give rise to serious questions of pathology and therapeutics.

Pulmonary consumption has been seen following the cure of herpetic affections.<sup>4</sup> Lentin, Loder, Pederit and Portal have given cases of phthisis which were ascribed to the suppression of the perspiration from the soles of the feet. A young man whom I had cured of an eczema of the legs, was attacked almost immediately after with a pleurisy, for which he put himself anew under my care, and from which he was relieved without any return of the eruption. I have seen bronchitis follow the cure of rupia in a scrofulous subject; and I have collected several analogous instances of pulmonary inflammations following the methodic cure of eczema, of various species of lichen and of psoriasis.

95. Diseases of the heart and of its membrane,<sup>5</sup> have also been observed to follow the suppression of various forms of cutaneous inflammation.

96. Admitting always that these facts are deserving of much attention, I yet affirm that the mischiefs attributed to the removal of *tettors* and *lineas* (*dartres et teignes*) are much rarer than is generally imagined. The most common consequences of these retrocessions observed are ophthalmic affections, inflammations of the glands of the neck, otitis, deafness, and now and then hydrocephalus acutus in infancy; pulmonary catarrh, phthisis and other affections of the thoracic viscera in young people; affections of the liver, ascites, cystitis, &c., in riper years, and in old age. The following case is an instance as rare as it is curious of these metastases.

A wine merchant consulted M. Petit for a discharge from the urethra, which had made its appearance some days before. The pain he suffered was severe; the matter discharged was precisely similar to that of gonorrhœa, so that Petit thought he had to do with this disease in fact, but the patient declared on his honour that he had run no risk of infection, and that his wife was in the enjoyment of perfect health. It was requisite, however, to find some cause for the appearance of this inflammation; and Petit discovered it when he learned that the patient had for a long time laboured under an eruption on the skin of the fore arm, which had suddenly disappeared a few days before the discharge came on. Petit ordered the application of a blister to the place where the eruption had previously existed, and all the symptoms of the presumed clap speedily disappeared.<sup>6</sup>

97. *Treatment.* An infinity of remedies and of different curative plans have been recommended in acute and chronic inflammatory affections of the skin, in a manner so general as to render the study

of their principal applications, from the same point of view, a subject of positive utility. This first glance will also recall to our notice certain therapeutical investigations, which it would be well to repeat at the present day, and under better ascertained conditions. Farther on in this work, in the history of each particular inflammatory affection of the skin, I shall hold myself bound to specify the doses and mode of administering the remedies proper for them at their different periods, and the modifications that may require to be introduced into the remedial plan, when the causes of the disease, the constitution of the patient, and the influence of any accidental or intervening lesion, are ascertained.

98. *Treatment of the acute inflammatory affections.* There are a certain number of acute inflammations of the skin, the conditions of whose existence are such that nothing can advantageously arrest their progress; the various phenomena that accompany these diseases are as little to be opposed as the natural actions of the economy. The part of the physician is then to regulate the evolution of the disease, and to endeavour to limit its effects.

This expectant method is applicable to simple erysipelas, to common measles, to uncomplicated scarlatina, and to all artificial inflammations of little intensity. With a few exceptions it ought also to be regarded as the proper method of treatment in all cases of unmixed eruptive fevers.

Thus, therefore, many acute inflammations are to be confined within moderate bounds by regimen—by abstinence and diluents: the disease exhausts itself, and the cure is accomplished naturally. But whenever these inflammatory affections appear inclined to spread to a large extent of the surface, to invade the subcutaneous cellular tissue, or other organs, or when they are accompanied by very violent febrile symptoms, we are to interpose, by means more or less energetic, according to circumstances,—provided always that no critical phenomenon proclaims these diseases as having a natural tendency to a speedy termination. It must not be overlooked, moreover, that these inflammations have most commonly a certain number of periods to pass through, and that we cannot, without danger to our patient, seek to cut them short at their outset.

99. The degree of warmth<sup>7</sup> proper to be kept up in the chambers of patients and around affected parts, is a point upon which we are often consulted in the treatment of acute inflammations of the skin, and especially in that of eruptive fevers. In measles, a somewhat elevated temperature has appeared to me, in general, advantageous. This would be very painful, and probably very prejudicial in scarlatina. It would add to the swelling and to the headache in erysipelas of the face.

100. The febrile symptoms accompanying acute and uncommunicable inflammations of the skin, are moderated by the abstraction of a quantity of blood, when the constitution of the patient admits of the practice; the progress of the eruption is then milder and more regular. I must, however, again remark, that there are a number of cases in which the spontaneous and natural termination of the diseases is so evident an event that it is well to abstain entirely from bleeding, which in this case would have the effect of needlessly reducing and weakening the patient. Of late, the local abstraction of blood has certainly been abused in the treatment of eruptive fevers. Recalling an erroneous opinion of M. La Mettrie, it has even been proposed to *cut them short* by means of repeated bleedings. This mistake pointed out, it must still be allowed that the abstraction of blood is imperatively called for in the treatment of those intervening inflammations which the disappearance of eruptions often gives rise to. Experience has amply confirmed, in my own hands, the advantages of this practice approved and established of old.<sup>8</sup>

Local bleedings are generally useful in phlegmonous erysipelas, in scarlatina anginosa, in variola accompanied with obstinate vomiting, in measles complicated with intense bronchitis, or with pneumonia. In children this mode of abstracting blood requires particular care; without it the bleeding is seldom effected in due measure, being almost always either insufficient or excessive; leech bites in them bleed either too little or too much.

<sup>7</sup> Pohl. *Pr. de regimine calor et frigoris in morbis exanthematicis.* Lips., 1767.

<sup>8</sup> Kortum. *Diss. de exanthematis febrium acutarum retrogressis per venæsectionem restituendis.* Hæle, 1741.

<sup>1</sup> J. B. Campet. *Sur l'apoplexie.* An xiv., (1805,) p. 18.

<sup>2</sup> Hoffmann. *Med. rat. syst.* p. i. s. l. c. 8, obs. 1 (*Morbili suppressi*).—Klein. *Intr. clin. lit. amaurosis (ex repulsis varis faciei).*

<sup>3</sup> Gilibert. *Advers. pract. primar.* p. 197 (*Phœnigmus per plumbea repercussus*).

<sup>4</sup> Unde dira nec rara tamen est phlyseon historia quæ a retropulsis nascantur herpilibus. (Lorry. *De morbis cutan.* p. 27.)

<sup>5</sup> Pressavin. *Nouv. traité de vapeurs*, p. 174, 12mo. Lyons, 1796

<sup>6</sup> Bouchard. *Essai sur l'emploi des dérivatifs externes*, p. 56, 4to. Paris, 1816.



101. When the eruption in fevers is either small in quantity or disappears improperly, Pujol informs us that it can be excited or brought back by the tartarized antimony exhibited in emetic doses, and the patient thus rescued from great jeopardy. In certain epidermic constitutions, *emetics* have been recommended as preferable to the expectant method and to blood-letting.<sup>1</sup> Generally recommended by P. Frank and Cullen in the beginning of acute diseases in which the skin appears more or less affected with inflammation, tartrate of antimony is at the present time confined in its application to a smaller number of cases. Often useful in erysipelas, owing to an outward cause, in urticaria occasioned by eating muscles, &c., tartrate of antimony and ipecacuanha have been too generally prescribed in the commencement of measles to favour the throwing out of the eruption, which may be impeded by morbid conditions of the most dissimilar kinds, such as convulsions, pneumonia, difficult dentition, &c. &c. Lastly, according to M. Fontaneilles,<sup>2</sup> a solution of a drachm of the tartrate of antimony to a pound of water, by way of fomentation, is an excellent antiphlogistic in erysipelas and various other acute cutaneous phlegmasia.

102. Purgatives, recommended with justice by Hamilton in scarlatina, are no less beneficial in hydrargyria, and in some cases of variola, of erysipelas, and other diseases. Halle informs us that several bold or rather rash attempts have proved that small-pox might sometimes yield through all its stages to the evacuating plan of treatment. I have not myself repeated this experiment.

103. *Diaphoretic drinks*,<sup>3</sup> particularly tepid infusions of borage and of sambucus nigra, may generally be advantageously prescribed to allay the thirst of the patients and determine to the skin during the two first periods of the eruptive fevers. Recourse is also sometimes had to the tepid bath in the treatment of phlegmonous erysipelas of the limbs, of ecchyma, of papular erythema, of the small-pox, &c. The same means are sometimes employed with a view to recall the eruption in measles when it has disappeared suddenly. The vapour bath is occasionally used with similar intentions.

104. *Liniments* of cream, of oil, or of grease diminish the heat and dryness of the skin in erysipelas, variola, and scarlatina; those of cream give great relief in the confluent small-pox of the face.

105. Wright, Currie, Martius, and others, conceive that the reaction which follows the affusion of cold water over the surface of the body, is often useful in certain cases of scarlatina and rubeola, attended with a dry and burning heat of the skin, or with a tendency to meningitis. I have never tried this method, against which there prevails a general prejudice in France.

Cold water, plain or acidulated, has been used with success as a lotion or a bath in the treatment of burns of various degrees of intensity, as also of ulcers, and in cases where the skin has been affected with heat and itching. Water in abundance as a diluent has been extolled by Hancock and many others in the treatment as well of general fever as of scarlatina, measles, and small-pox.

106. Harris relates several instances of the good effects of the application of *alcohol* in erysipelas;<sup>4</sup> *ether* is also sometimes used to burns; and James<sup>5</sup> tells us he has often tested the efficacy of this remedy in the painful inflammation that occasionally follows the use of blisters.

107. *Urtication*, or stinging with nettles has been imagined to restore the eruption of fevers, in which it had receded too rapidly. I have often replaced this means by the use of sinapisms, and of mustard baths in the cases of children.

108. *Blisters* are often successfully used to fix erysipelas of an erratic nature, to bring the inflammation to the exterior in phlegmonous erysipelas, and to restore it in case of its retrocession in eruptive fevers. Stoll<sup>7</sup> conceives that their application, in miliary fevers,

ought to be preceded by the use of purgatives; a precept which seems too general.

109. The *nitrate of silver* in substance or in a concentrated solution, has of late been recommended as a cautery to check the progress of certain acute diseases of the skin, and to prevent the mischiefs that sometimes complicate them. This plan which has been styled the *ectrotic* has been put in practice in the case of small-pox, of erysipelas of the face, of zona, and of several other varieties of herpes.

110. Experiments to a certain extent demonstrate that *mercurial preparations* do really exercise a remarkable influence over the evolution of acute cutaneous inflammations. Recommended in erysipelas by M. Ricord, they had previously been used as preservatives against variola and scarlatina. According to Wedekind, small-pox pustules are not evolved in those situations that have been covered with a mercurial plaster, and the effects of inoculation are prevented by washing the punctures with a solution of corrosive sublimate and sal ammoniac.

Dessessart has extolled *calomel* as giving immunity from small-pox.<sup>8</sup> Sacco and Selig say that mercury destroys the specific properties of vaccine matter, and weakens or interrupts the progress of the pustule already formed. Hoffman, Baglivi, Lettsom, Lentin, Andry, Reil, Hufeland, Hildebrandt, Cotugno, and others have pushed mercury to salivation in the very beginning of small-pox, in order to mitigate its violence. Huxham, Bailey, Douglas, Kreysig, Hufeland and others have also recommended it in this disease, and Loesecke, Mueller, and Hamilton have reaped great advantages from the medicine in measles. I have repeated several of their experiments, and in the proper place will make known the results of my inquiries.

111. As to *preservative methods*, I can only quote the efficacy of the vaccine pustule against small-pox, and the demonstrated usefulness of belladonna in epidemic scarlet fever. The property ascribed to camphor of destroying the infection of measles is much less than certain. Intermittent erythema and urticaria are to be treated like febrile accessions. As to *periodic inflammations* dependent on amenorrhœa, on dysmenorrhœa, or the suppression of an habitual evacuation, their recurrence is prevented by reinstating these evacuations or finding substitutes for them in blood-letting, and the use of purgatives.

112. *Treatment of chronic inflammations.* The treatment of chronic diseases of the skin is held with justice to be one of the most difficult matters in the healing art. Besides getting occasionally well under the influence of the most dissimilar remedies, the choice and application, and occasion to make use of which are beset with numerous difficulties and much uncertainty, we cannot conceal from ourselves something of a secret disinclination to attack many of these affections, the disappearance of which may be succeeded by more or less serious symptoms.

113. Vegetable diet, white meats, &c., are available in a great many chronic inflammations of the skin appearing in young subjects, or in people of mature years, but of sound constitutions. A sober and regular life, habitual cleanliness, a diet composed of white meats, fresh vegetables, and ripe and watery fruits, contribute essentially to the effects of the therapeutic agents employed. Living on white meats (*diète blanche*), fish, chicken, &c., has been held by some as the only efficient remedy against chronic inflammations of the skin.

*Milk diet*<sup>9</sup> perseveringly employed, has accomplished cures where pharmaceutical preparations, directed with the best views, had totally failed. This regimen, however, is injurious to elderly people; under its influence I have seen several fall into a state of anemia, which a recurrence to more nutritious food caused to disappear.

Some individuals digest milk with difficulty; almost all, however, at length become accustomed to it, as Pujol well observes. The stomach is sometimes brought to bear this article of diet by the use from time to time of lime water. Some digest asses' milk more readily than any other; some again find goats' milk, either alone or mixed with barely-water, sit most lightly on their stomachs.

114. Veal or chicken broth may be recommended to those who have a distaste to the habitual use of milk; particular advantages have been presumed, by some, to be possessed by broths made from the

<sup>1</sup> Stoll. Ann. Méd., i., pp. 15-58.

<sup>2</sup> Bullel. de la Soc. med. d'emulation. Octob., 1823.

<sup>3</sup> Jaubert. Déterminer quelles sont, dans les fièvres exanthématiques, les circonstances dans lesquelles le régime rafraichissant est préférable à celui qui est échauffant, et celles dans lesquelles on doit employer une méthode contraire. (Mém. de la Société royale de méd., in-4., t. 1, 1776, p. 529.)

<sup>4</sup> Harris (G.). Diss. med. et chir., 8o Lond., 1725.

<sup>5</sup> James (R.). Medical Dictionary, in fol., vol. i., p. 699.

<sup>6</sup> Schwarz (Hufeland. Journal der prakt. Heilkunde., v B. 2 St. p. 153).

<sup>7</sup> Stoll. Rat. Med., t. ii., p. 262.

<sup>8</sup> Mem. de l'Institut. Sc. phys., t. iiii.

<sup>9</sup> "Lac in omnibus cutaneorum morborum curationibus adeo celebre est, ut multi illi soli rite applicato omnem omnino fiduciam addant, reliquis neglectis, si pro solo victu eo utantur." (Lorry, de morb. cul., p. 339.)



sea-turtle, from the lizard<sup>1</sup> and the viper;<sup>2</sup> and the numerous cases detailed of their good effects in Italy, Germany, France and England in cases of cancer, lepra, elephantiasis, syphilitic eruptions, &c., should induce us without prejudice to repeat these experiments.

115. *Fasting*, or the use of a quantity of food less than the appetite demands (*cura famis*), has been recommended in various forms of chronic inflammation of the skin, and particularly in syphilitic affections. I have myself often obtained great and permanent advantages by reducing the quantity and changing the quality of the aliment. Lorry gives instances of this kind.<sup>3</sup> But few patients have the firmness to restrict themselves to a severe regimen and to endure the privations it implies. Females submit more readily than males. A celebrated *accoucheuse* of Paris, otherwise of a good constitution, suffered under a *phagedenic tetter* of the cheeks; she gave up her usual mode of living which was very nutritious and *recherché*, and confined herself to vegetables dressed with a small quantity of butter and seasoned with salt: she recovered, and ten years afterwards had had no relapse.

Under the influence of these severe fasts, the constitution is so much weakened, that though the skin diseases get well, the strict regimen has often to be abandoned; and then the eruptions reappear, in the same measure as the general health improves under the stimulus of better diet.

116. Circumstances depending on age, on temperament, on anterior or concomitant affections, and on the particular situations in which patients are placed, sometimes require the tonic and *strengthening plan* to be substituted for the fasting and the antiphlogistic treatment, which, however, is generally much more extensively applicable.—See particularly under the heads *rupia*, *lupus* and *impetigo*.

117. If the advantages of an appropriate regimen are well proved, the mischiefs arising from imprudences and irregularities in the mode of living, from the abuse of coffee,<sup>4</sup> of strong drink, of salt and highly-seasoned food, &c., are not less apparent. It is enough, in a great number of cases, for patients in the way of recovery, or actually well, to abandon for a moment the strict system they had followed, to suffer an increase or a recurrence of their disease. Sometimes, too, these relapses happen after such an interval as seemed to warrant some remission of the severe watch that had been previously kept over the kinds and quantities of food employed.

118. *Rest*, and the absence or diminution of muscular exertion of every kind, have a marked influence on the progress of chronic inflammations of the skin. I have seen individuals attacked with severe psoriasis, completely cured by remaining patiently for a month in bed; and the effects of the same endurance are not less remarkable upon eczema and impetigo. A plan of life the very opposite of this—hardship and fatigue—has been recommended by Van Swieten against syphilis. The results of my own experience are not favourable to this counsel, as I have always seen active exertion of body aggravate syphilitic affections and impede their cure.

119. Daily observation demonstrates the utility of *external remedies* in the treatment of chronic inflammations of the skin. The ancients often made use of them, but it was almost always only after the exhibition of one or two cathartics. Lorry has restricted their employment to too narrow a circle, and repudiated a number of topical applications of undeniable worth. Bell again has extolled them too highly; because, if the necessity of acting directly on the organ affected be demonstrated in a great number of cases, it must also be owned that in a multitude of chronic inflammations of the skin

(eczema, lichen, lupus, psoriasis, lepra, pityriasis, Greek elephantiasis, &c.), the local affection of the integuments is nothing more than one of the conditions of the disease, and that recoveries after simple local treatment are commonly incomplete.

120. Some external remedies, such as the acids, the nitrate of silver, actual cautery, &c., have a mere local effect, whilst the others are followed quickly or at a later period by phenomena which result from the absorption of the substances applied to the surface of the body. The salivation that follows the inunction of mercury; the emaciation observed after the protracted use of iodated baths or unguents; the increase of muscular strength from the sulphureous bath; the colic and paralysis that result from the application of the salts of lead to abraded surfaces; the pains of the bladder, occasioned by blisters, &c.; bear witness to these secondary effects, and to their importance.

121. When we reflect that so many diseases of the skin are owing to the neglect of proper cleanliness, and that the greater number are accompanied with an increased heat of surface, or by morbid secretions, we cannot be surprised at the excellent effects obtained from the use of *simple baths*, whether as soothing inflammation actually existing, or preventing its return. The advantages of baths of the decoction of bran, of emollient, gelatinous and oily baths, and those prepared with starch, marsh-mallows and lettuce, are no less evident. These are all preferable to the ordinary tepid bath. We know that fish-glue, and the glue prepared from bullocks' hides, in the isle of Rhodes, were used dissolved in water by the old Greeks in the treatment of burns, psoriasis, ecthyma, &c. These gelatinous baths ought in general to be administered at a very moderate degree of heat, as prolonged and repeated hot baths are rarely endurable when the skin is in a high state of inflammation.

122. *Cold baths*, and bathing in running streams in particular, are serviceable in a great number of chronic inflammations, which from their nature, their form, or their long continuance, have become fixed to particular places. I have made a number of experiments on the administration of *narcotic cold baths* in the treatment of chronic and painful inflammations of the integuments, the results of which were highly satisfactory to me.

123. *Soothing fomentations*, such as those prepared with decoction of marsh-mallows, of althea, of the *acanthus spurius*, of lactuca sativa, of beet root, of the herb pellitory, and other mucilaginous plants, as also those esteemed of a sedative nature, that are prepared with poppy-heads, with elder-flowers, with olibanum, with melilotus officinalis, with euphrasia, veronica chamaedris, the leaves and stems of the plantago, &c.; likewise cataplasms of crum of bread, rice flour, potato starch, &c., applied of a gentle warmth to circumscribed inflamed surfaces are generally useful.

124. By *anointing* the body with oil, or grease of any kind, the skin is made softer and more pliant, and pain, heat and itching are sometimes allayed. It was long thought that each variety of greasy substance employed had peculiar curative virtues, and M. Chevreul<sup>5</sup> has, in fact, ascertained that these bodies not only vary in the relative amounts of their constituent elements, but also by the presence or absence of certain accessory principles, which possibly may be not without influence in a therapeutic point of view. If lard be more generally employed than any thing else, it is only on account of the readiness with which it is everywhere to be procured.

Hufeland<sup>6</sup> has recommended frictions with olive oil, or with nut oil in tetter (*dartre*). Linseed oil is familiarly used in the treatment of burns; and Delpech has proposed the employment of oils generally in scabies.

125. The advantages of *blood-letting* are less obvious in chronic than in active inflammatory diseases of the skin. Yet general as well as local bleedings by means of leeches and cupping-glasses have, under my own eyes, had the happiest effects in many chronic cases. I have derived the greatest advantage from this practice in eczema, impetigo of the face and hairy scalp, psoriasis, lichen, local prurigo, herpes phlyctenodes and other forms of chronic affection. It is generally proper to repeat the local abstraction of blood in young

<sup>1</sup> Roemer (J. J.). Ueber den Nutzen und Gebrauch der Eidexen in Krebssschaden, der Lustseuche und verschiedenen Hautkrankheiten. Leipsik, 1788.—Ancien journ. de médéc., tom. lxxx. p. 144.—Med. Comment. of Edinb., vol. ix., p. 257.—Carminati, Opusc. therapeut., 4, tom. i., 1788.

<sup>2</sup> Home (F.). Clinic. researches.—Dehaen. Rat. Med. P. ix., c. 6, sec. 3.—Carminati, xii., c. 6, sec. 2.—Colombier, Code de méd. milit., t. v. p. 279.

<sup>3</sup> "Certè valentissimum novi hominem exercitio et animi et corporis apprime deditum, qui miserè herpetibus, et ad faciem et ad artus laborabat, prurientibus illis, et noctu dieque vexantibus. Quoniam vini fortioris usui moderato addictum noveram, solâ vini mutatione in oligophorum et tenue sanatum fuisse testor. Alium vidi quem aqua potus omnino liberum fecit ab hujusmodi vitii." (Lorry. De morb. cutan., p. 40.)

<sup>4</sup> M. Vattain attended a lady, in 1747, for a *violent eruption* on the arms. All the remedies employed failed to touch the complaint till she was persuaded to abandon a cup of coffee which she was in the habit of taking regularly morning and evening. (Saucerotte, Hygiène chirurgicale. Prix de l'Acad. de Chirurg., t. v., p. 40.)

<sup>5</sup> Chevreul. Recherches chimiques sur les corps gras d'origine animale, in-8o. Paris.

<sup>6</sup> Journal der prak. Heilkunde, X. B. 4 St., p. 143—xiii B. 4 St., p. 179.



subjects as often as the inflammation shows a disposition to extend, or is attended with considerable pain. I have even put this practice in force in the cases of elderly people of hale constitutions, with great advantage.

126. The *preparations of sulphur* have long and deservedly enjoyed an extensive reputation in the treatment of chronic diseases of the skin, and especially of scabies.

*Sulphureous waters* taken internally during one or several seasons modify the constitution materially, and perhaps accomplish a greater number of cures than any other means. In France, the natural sulphureous mineral waters of Aix (Provence), of Bagnères,<sup>1</sup> of Bagnères de Luchon, of Billazai (Deux Sèvres), of Barèges,<sup>2</sup> of Cauterets, of Enghien, of Gréoulx (Basses Alpes), of Bagnols (Loire), of Aix (Ariège), and of Saint Amand (Nord), are justly celebrated; in Germany, those of Aix-la-Chapelle, of Wisbaden, and of Nenndorf; those of Aix and of Saint Gervais, in Savoy; of Baden, of Lapeyrière, of Schinznack, and of Louèche, in Switzerland;<sup>3</sup> of Guitra (Corsica), of Argui, in Piedmont; of Alhama, and of Hardeles in Spain; those of Naples; those of Baden (Lower Austria), of Baden (Swabia); those of Harrowgate, Leamington and Bath, in England, are also very salutary. After having been drunk for several days, some of these waters, particularly those of Louèche, occasion a particular eruption, characterized by small acuminated and itchy spots, and red blotches which appear first on the limbs, but, by and by, extend over nearly the whole surface of the body: a febrile paroxysm, accompanied by anorexia and great thirst sets in, the sleep is disturbed, and the urine is turbid and high coloured. All these symptoms abate within eight or ten days in the order of their appearance; the epidermis is thrown off in flakes, and the pruritus is soon the only symptom that remains for some little time longer. This eruption appears to be one evidence of the beneficial operation of the waters, and ought not to cause a suspension of their use. The baths of Baden (Argovie), the waters and baths of Saint Amand sometimes, but by no means so generally, occasion symptoms analogous to those produced by the waters of Louèche.

There are many other mineral waters found over the face of different countries of Europe which are also familiarly used internally in skin complaints.

127. I have had ample opportunity at La Charité and elsewhere of satisfying myself of the virtues of *artificial sulphureous baths*; but to secure their good effects, it is certainly necessary to regulate the *temperature* and the *duration* of these baths, not only by their manifest effects on the skin, but by their influence on the constitution. In a very great number of cases I have found that there were immense advantages to be derived from gradually increasing the time of remaining in the bath to the amount of even five or six hours. This practice, so commonly followed at the natural springs, is by no means to be neglected in our establishments of artificial mineral waters, as some have proposed. I have attended children who have been brought to remain in the bath during three whole hours; and adults and persons further advanced in life, have at length been induced to stay four or five hours without exhaustion in the artificial sulphureous-water bath. The chief obstacle to this practice arises from the patients themselves, who, living in large towns and not duly appreciating its importance, will rarely consent to sacrifice so many hours to the care of their health. It is by this means, nevertheless, that those constitutions which make individuals subject to skin complaints are most certainly modified, and that the relapses so frequent after every mode of treatment, are most surely prevented.

128. The *hot air bath* and *dry sulphureous fumigations*, tried in the treatment of skin complaints by Glauber<sup>4</sup> and Lalouette,<sup>5</sup> and brought forward anew with convenient modifications by M. Galès,<sup>6</sup> are now

rendered easily and safely applicable by means of the improved apparatus of M. Darcet.<sup>7</sup> Messrs. Clarke<sup>8</sup> and Wallace<sup>9</sup> have severally published interesting remarks on their effects, which to me, however, seem to be not without a tinge of exaggeration. The same thing may be said of the observations of Decarro, of Vienna.<sup>10</sup> Sulphureous fumigations are undeniably often serviceable in chronic eczema, but they are rarely available against pityriasis, lepra and impetigo. They certainly weaken the patients more than sulphureous-water baths; they also modify the constitution in a less durable manner, and more rarely accomplish perfect cures. These fumigations, too, sometimes irritate the skin further; they have been known to occasion syncope, a sense of suffocation, &c. It would be imprudent to attempt their use without great discretion among children, pregnant women, asthmatic persons, or in cases where there was any suspicion of tubercles in the lungs.

The *vapour of sulphur* administered by the process of M. Balland is much less irritating than fumigations with sulphureous acid gas, in lieu of which it may often be substituted with advantage.

*Lotions and ointments of sulphur* have the same effects as the baths; their activity may be increased by the addition of different substances; such as iodine and mercury, which are more or less energetic in their actions, or diminished by others that seem to have little or no sensible effect on the economy, such as charcoal and sulphuret of antimony. These tropical applications do not modify the constitution, and are generally less useful than the prolonged employment of sulphureous-water baths.

129. The *sulphuret of potassa, of soda, and of lime* are made use of, not only for the composition of artificial baths, but in solution internally, in the dose of five or six grains to the pint of water as a drink, or in the same quantity mixed with some vegetable extract. Pure sulphur is also prescribed internally in the dose of from twelve to twenty grains, especially by the vulgar, as a purgative, or in the idea that it may be absorbed and thus affect the constitution generally.

130. Baths of sea-water, cold or hot,<sup>11</sup> and those of the mother-waters of our salt-mines<sup>12</sup> are very efficacious in many forms of chronic inflammation of the skin, especially in serofulous subjects. Russel advises the internal use of sea-water before beginning to bathe. Lind has recommended sea-water in scabies and obstinate forms of ulceration. M. Delaporte has treated a great number of individuals affected with scabies by means of sea-water baths, and M. Zompitoute<sup>13</sup> has combined their action with that of the sulphuret of potassa, a method that deserves recommendation, especially in the cases of sailors and of soldiers quartered in seaports during the heats of summer.

I have myself seen very obstinate diseases of the skin, and particularly chronic eczemas of the verge of the anus, which had resisted arsenical preparations, get permanently well after one or two seasons of sea-bathing. Should the disease return, the sea-bathing must be resumed the following summer, until the cure seems established. This practice is said to be very generally followed in the hospital at Newcastle; and we may soon expect to be in possession of valuable reports on this interesting point of therapeutics, which has not yet been sufficiently attended to, from the physicians to the establishments for sea-bathing which have been formed in France at Dieppe, Boulogne, Havre, and Rochelle. It is of some importance also to point out those cases in which sea-bathing is contra-indicated, as well as those in which it proves advantageous. I have thought that it was prejudicial in spare and irritable temperaments. In very extensive skin affections, and in squamous inflammations, it is generally well to advise a few tepid baths, before entering on those of cold water. It is seldom that sea-bathing, as a remedial means, is employed alone; it is generally combined with some internal treatment, which, of course, always enters for something in any result obtained.

<sup>1</sup> Lorry. Op. cit. p. 338.—Ganderax. Recherch. sur les propriétés phys. chimiq. et medic. des eaux min. de Bagnières de Bigorre, in-8o. Paris, 1827.

<sup>2</sup> Bordeu (Th.). L'usage des eaux de Barèges et du mercure dans les écrouelles. Paris, 1752, in-12.

<sup>3</sup> Paven (J.). Essai sur les eaux minérales thermales de Louèche. Paris, 1828, in-4o.

<sup>4</sup> Glauber (Jean. Rudolphe). Furni novi philosophici, sive descriptio artis distillationis novæ, in-12. Amstelodami, 1661.

<sup>5</sup> Lalouette (P.). Nouvelle méthode de traiter les maladies vénériennes par les fumigations. Paris, 1776.

<sup>6</sup> Galès. Mémoire et rapport sur les fumigations sulfureuses appliquées au traitement des affections cutanées, in-8. Paris, 1816.

<sup>7</sup> Description des appareils à fumigations établis sur les dessins de M. Darcet, à l'hôpital Saint-Louis, en 1814, etc., in-4. Paris, 1818.

<sup>8</sup> Clarke (Arthur). An essay on diseases of the skin, containing practical observations on sulphureous fumigations, etc., in-12. London, 1824.

<sup>9</sup> Wallace (W.). Observations on sulphureous fumigations, etc., in-8. Dublin, 1820.

<sup>10</sup> Decarro (J.). Observations sur les fumigations sulfureuses. Vienne, 1819.

<sup>11</sup> Eph. nat. cur. Dec. iii. Ann. vii et viii obs. 68.—Frank. de curand. homin., lib. iv., p. 153.—Ranoe. Act. reg. soc. med. havn., vol. i., p. 331.

<sup>12</sup> Götz. Bulletin des scienc. méd. de Férussac, t. iv., p. 283.

<sup>13</sup> Annales de Montpel., Dec., 1812.



131. At Paris, *artificial alkaline baths*, which approximate, in a certain degree, in their composition to those of sea-water, are prescribed under similar circumstances. These are prepared in the hospitals by dissolving from four to six ounces of the subcarbonate of soda, in an ordinary tepid bath. Common culinary salt sprinkled on the surface of cutaneous eruptions, has been recommended by Schelling.<sup>1</sup> The salt-water contained within oysters, is a vulgar remedy for ulcers of the leg; and I know a patient who succeeded in getting rid of a very disagreeable eczema *podicis*, by employing this water as a lotion.

[The brine of salt-meat is another popular remedy, in England, against various forms of skin disease.]

132. Baths of *saline, natural mineral-waters*, have also been occasionally employed in affections of the skin, the species of which, however, have not been particularly described.

133. *Soap lotions*, formerly much recommended in skin diseases, are still generally used as a means of cleanliness, and have lately been advised by M. Lugol, in cases of scabies.

134. *Local baths*—(manuluvia—pediluvia—hip-bath)—have been prescribed, not only as topical applications, but with a view to promote the absorption of various medicinal substances. Foot-baths containing corrosive sublimate or nitro-muriatic acid, have been tried in several eruptive diseases, and in syphilitic affections, but with very variously-reported effects.

135. *Saliva*, which is spoken of by Galen and Celsus,<sup>2</sup> is still a popular application to the scales of pityriasis, and to lichen of the face. Nurses often employ their spittle to allay the violent itching which children suffer who are attacked with strophulus.

136. The *urine*, especially that first passed in the morning—*urina sanguinis*—was an ancient remedy, and is still used by the vulgar, when they are attacked with itch, *pediculi*, and chronic eczema of the hairy scalp.

137. General and partial *vapour baths*<sup>3</sup> may be of service in restoring to the exterior certain inflammations of the skin that have receded, in the removal of squamæ and of scabs, in exciting the circulation in those regions of the skin to which they are particularly applied, and in stimulating inflammatory affections of an indolent nature. They are further usually employed under a great variety of circumstances which I shall be careful to expose in their proper places. P. Frank even tells us that the vapour which exhales from the body of an animal just killed, has proved a remedy in certain cases of cutaneous disease.<sup>4</sup>

138. Several chronic forms of inflammation of the skin have been successfully treated by *iodine and its compounds*.<sup>5</sup> This medicine has been particularly recommended in cutaneous affections occurring in scrofulous constitutions. I have seen good effects from the combination of iodine with mercury, sulphur, and opium in scrofulous lupus, and in tubercular and ulcerated syphilitic affections. These compound remedies, as their action is very energetic, require to be carefully watched. Like all the preparations of iodine, they have a very marked effect on the constitution.

*Externally*, an ointment or pomatum of iodine and of the proto-ioduret of mercury, as also solutions of iodine of various degrees of strength, general or local iodated baths, iodated cataplasms, caustic iodine (a solution of an ounce of iodine and an ounce of ioduret of potassium in two ounces of water), &c., have all been employed by M. Lugol and others, in the treatment of scrofulous lupus (*scrophules esthiomènes*) and of some other cutaneous affections. I have myself particularly tried the action of the iodurets of mercury and of sulphur.

*Internally*, the *iodated mineral water*, prepared according to the formula of M. Lugol, appears to me the best of all the forms devised for the exhibition of iodine. The medicine may also be prescribed in the solid state in gradually increasing doses of half a grain, three-quarters of a grain, one grain, one grain and a quarter daily. I shall have occasion to revert to the effects of this active remedy under the heads *lupus* and *syphilitic affections*.

139. *Styptics and astringents* to the skin have been strangely abused by quackery. Lorry cites a serious instance of their ill effects.<sup>6</sup> He is, nevertheless, of opinion that the cure of old and obstinate cutaneous affections having been once obtained, it is proper to endeavour to give tone to the affected parts of the skin by the use of various styptics, such as washes of the acetate of lead, acidulated baths, solutions of aldm, &c.; and it is undeniable that this practice, much extolled by Bell, is often advantageous. The ill effects of the *salts and oxides of lead* have been greatly exaggerated.<sup>7</sup> These preparations are often useful in allaying certain inflammations of the skin, accompanied by morbid secretions. *Preparations of zinc*<sup>8</sup> are used under similar circumstances, and with the same views.

140. The *sulphate of alumina*<sup>9</sup> in solution as a wash, in the proportion of an ounce, or an ounce and a half of the salt to a pint of water, lessens the morbid secretions of the skin in eczema fluens, lichen agrius, &c., and greatly relieves the itching that accompanies these diseases. This means, recommended by Turner, is not duly appreciated by Lorry. *Borax*<sup>10</sup> has also been employed externally, united with hog's-lard and alum, in the treatment of pityriasis and several other chronic inflammations of the skin.

The sub-acetate of copper, or verdigris, besides a multitude of other preparations of this metal,<sup>11</sup> have long been familiarly used as external applications in cutaneous affections, especially in those of a syphilitic nature.

141. *Lotions and fomentations of simple cold water* may be advantageously employed in a number of cases to diminish uneasy sensations of heat and itching.

*Compression*<sup>12</sup> recommended by Bell, and particularly by Baynton in the treatment of ulcers, by Bretonneau in phlegmonous erysipelas of the legs, and by Velpeau in cases of severe burns, has been tried in eczema, scirrhus tubercles, nævi, and Arabian elephantiasis. The situation and disposition of parts may sometimes render compression difficult or painful, and as it does not attack the conditions that lead to the formation of cutaneous diseases, it is generally to be regarded as a remedy of secondary importance.<sup>13</sup>

142. *Charcoal*<sup>14</sup> has been tried internally and externally as a remedy in scabies, which may be cured more certainly and easily by other means. Thomann obtained the cure of tinea in three cases, in the space of from three to five days, by the use of charcoal in powder, and soapy lotions. M. Brache did not succeed by the same means in less than a month. According to Hunold, charcoal made into a paste with rum is a popular remedy in various skin complaints in the city of New York. The trials I have myself made with charcoal, either alone or combined with sulphur, have satisfied me that it is of no use in favus, and that the other affections of the hairy scalp yield

<sup>6</sup> Vidi hominem suppressos per saturnini effectum herpes longis atque atrocibus malis ventriculi atque hepatis redimere. (De morb. cutan., p. 342.)

<sup>7</sup> Alexandri Tralliani, lib. i., c. 13.—Pauli Æginetæ, lib. iv., c. 2, p. 20.—Aitkin (John). Observations on the external use of lead. London, 1771, 8vo. Goulard. Traité sur les effets des préparations de plomb, etc. Montpellier, 1766.—Delabrosse. Journ. de méd., t. xxv., p. 576.—Frank. De cur. homin. morb., lib. iv., p. 67 (non esse tam perniciosum).

<sup>8</sup> Journ. génér. de méd., t. xxvi., p. 465.—Hanke. Emploi du chlorure de zinc (Arch. gén. de méd., t. xx., p. 277).—Bell. On ulcers.

<sup>9</sup> Lindt. Diss. de alumin. virtut. med. Gœt., 1784.—Alexandri Trall., lib. i., c. 12 seq.—Paul. Ægin., l. iv., c. 20. (Terra cimolia succo solani subacta.)

<sup>10</sup> —Reinhart. Utilité du borax contre les dartres furfuracées. (Revue méd., t. xvi., p. 462.—Arch. gén. de méd., t. xiv., p. 458.)

<sup>11</sup> Desault. Journ. de Chirurgie, t. iii.—Stark. Inst. clinic, p. 30.

<sup>12</sup> Bretonneau. Avantages de la compression dans les inflammations de la peau, in-4. Paris, 1815.—Guérin. Journ. analyt., t. i., p. 93. Nouv. Bibliothèque, méd., août 1816.

<sup>13</sup> This remark certainly will not, and is not probably meant to apply to the treatment of ulcers of the legs, in which graduated compression is one of the most valuable curative means we possess.—R. W.

<sup>14</sup> Duval. Obs. et Reflexions sur le traitement de la gale idiopathique par la poudre de charbon. Bulletin des Sciences, t. viii., p. 228.—Thomann. Ann. inst. clinici de Vireob., 1799. Extract in Journ. génér. de méd., t. xix., p. 223.—Grioris (F. B.). Considérations sur l'utilité de la poudre de charbon de bois dans le traitement de la teigne, de la gale et de quelques autres affections cutanées, in-4. Paris, an xii.

<sup>1</sup> Marcus und Schelling. Jahrbücher der Medicin als Wissenschaft, ii B. 1 St. p. 42.

<sup>2</sup> Galenus. De simpl. medic. facultatibus, lx.—Celsus. Lib. v., cap. 1, De papulâ.—Schurig. Sialogia, p. 132.

<sup>3</sup> Atumoneilli. Memoire sur les eaux minérales de Naples et les bains de vapeurs. Paris, 1804.—Assalini (Paolo). Ricerche mediche su i bagni a vapore e di calorico, e sulle fumigazioni di sostanze ammoniacali e balsamiche, di zolfo, di mercurio, etc. Naples, 1820.—Rapou. Traité de la méthode fumigatoire, 2 vol., in-8. Paris, 1823. Philouze. Essai sur les bains de vapeurs employés à Saint-Louis, in-4. 1826.

<sup>4</sup> Frank (P.). De curand. homin. morb., lib. iv., p. 63.

<sup>5</sup> Gimelle. Obs. sur l'emploi de l'iode dans le goitre, les scrophules et les dartres (Revue méd., 1821, t. vi., p. 81, and Journ. univ. des scienc. méd., t. xxv., p. 5).—Kelley. Emploi de l'iode dans le goitre, les scrophules et les dartres (Journ. compl. t. c. xvii., p. 307).—Belliol. Essai sur les avantages de l'iode dans le traitement de la dartre furfuracée, etc. Paris, 1825, in-4.—Lugol. Mém. sur l'emploi de l'iode, in-8. Paris, 1829. Troisième Mémoire sur l'iode, in-8. Paris, 1831. (Scrophules cutanées ulcéreuses et esthiomènes, pp. 46-61.) Masson (Th.). Sur l'emploi de l'opium joint à l'iode dans la scrophule cutanée ulcéreuse (Journ. de méd., t. iv., p. 117).



more readily to other remedies. The application of charcoal in powder to the ulcers that follow rupia, lupus, &c., powerfully stimulates the ulcerated surfaces, and greatly increases the quantity of discharge.

The workers in charcoal told M. Poissant, a practitioner at Brest, that they always escaped scabies and tetter (*la gale et les dartres*). Lampadius gives some cases of inflammatory affections of the skin cured by the carburet of sulphur.

143. The *oxide of manganese*,<sup>1</sup> in powder, has been used outwardly as an absorbent in the treatment of old ulcers; combined with various substances as a *depilatory*; and along with one or two parts of lard, as an application to different eruptions of the skin and scalp, with better effect, it is said, when these diseases had advanced to a state of ulceration, than when they were simply scaly or miliary. The workmen employed in the mine of manganese<sup>2</sup> at Macon, are said not to be subject to itch; and the people in the neighbourhood, attacked with this disease, seek a remedy by labouring at the works for a time.<sup>3</sup> The oxide in pills, and even by way of gargle in the same, and also in syphilitic affections, has been recommended by Dr. Kapp of Bareuth.

The *muriate of manganese* has been prescribed, in various cutaneous affections, in the dose of from one to twenty grains daily; but I have not made trial of the medicine myself.

144. Several inflammatory diseases of the skin, primarily of a chronic nature, or become so, often remain long stationary; circumstances in which local stimulants are had resource to with advantage. The practice is followed by a temporary exasperation of the symptoms, after which complete recovery sometimes follows. In the use of these means we are to beware of exceeding certain limits; for by pushing them too far the disease may be aggravated, and made to assume a more serious character than it had originally.

145. *Lime*, united with an equal quantity of soap, is used to destroy small tumours, warts, excrescences, and *nævi*. Hufeland,<sup>4</sup> in cases of tinea, recommends a mixture of equal parts of olive oil and of lime. Lime appears to be the basis of a quack depilatory powder employed in France with success in favus. Combined with sulphur and some fatty body, lime also forms a pomatum of the same character, often employed in various forms of skin disease, particularly in scabies. It must not be forgotten that when used externally, either by itself or mixed with oil, lime sometimes stimulates too much, or otherwise causes the too rapid disappearance of cutaneous eruptions. Internally the hydrochlorate of lime (*muriate of lime*) has been recommended in cases of scrofula, lupus and elephantiasis.

146. The *liquor ammonia* properly weakened has been recommended to check the spreading of the inflammation in burns. Lotions of this preparation, and various salves into which ammonia enters have been long used in different cutaneous affections, with what advantage is doubtful.

147. *Acid lotions*, and liniments with various proportions of different concentrated acids have been recommended in the treatment of such chronic inflammations of the skin as impetigo, rosacea, prurigo, &c.

*Acetic acid* diluted with water, of old recommended in lepra and lichen,<sup>5</sup> has been recently brought again into notice in these diseases by Mr. Wilkinson.

*Sulphuric acid*<sup>6</sup> has been used externally as a cautery or as a stimulus to certain chronic inflammations of the skin. *Nitric acid*<sup>7</sup> combined with lard forms an ointment that has been greatly vaunted by Alyon. In a state of purity it is employed to cauterize various eruptions, or to destroy the surface of foul and ill-conditioned ulcers; diluted with water it forms an excellent wash to many sores of the same description. The *hydrochloric* (*muriatic*) *acid* diluted with water favours the recovery

of frost-bitten parts; made into an ointment with lard, or united with some fixed oil, it has been prescribed in tinea, various scaly eruptions, and scabies. The medicinal *hydrocyanic acid* in the proportion of one part to two of spirit and twenty of water, has been found by Dr. A. T. Thomson to allay the pain and irritation of impetigo.<sup>8</sup> Dr. Schneider, of Dusseldorf, has derived great benefit from the use of a drachm and a half of hydrocyanic acid, added to six ounces of spirit and as much rose-water, in many scaly affections attended with severe itching, and especially in those eruptions upon the genital organs that often prove so troublesome. These prescriptions I have myself tried, and by and by shall have occasion to refer to the results.

148. Deimann and Van der Bosch have celebrated *chlorine* applied externally in some skin diseases,<sup>9</sup> and Dr. Kapp has reported new instances of its successful use in cases where there appeared an excess of plastic power. Duncan has recommended in tinea and some ulcerated states of the skin, the application of an oil through which a current of chlorine has been passed. Chlorine has also been tried in scabies, and the *Pharmacopée universelle* gives a recipe for a *pommade antipsorique* or itch ointment composed of a drachm of chlorine and an ounce of hog's lard.

149. The *chlorate of soda* was used by Alibert in lupus (*dartres rongeantes*) and by Roche in a case of tinea favosa (*porrigo lupinosa*, Willan) which had resisted other remedies.<sup>10</sup> We have also reports of three cases of eczema of the hairy scalp (*tinea mucosa*) treated by the same means, in the work of Chevallier,<sup>11</sup> who has given the formula of a *pommade* composed of chlorate of lime and turpeth mineral, which was found beneficial in a case of obstinate tetter (*dartre rebelle*.) According to M. Derheims<sup>12</sup> scabies may be cured in from six to ten days by a dilute solution of the chlorate of potassa, soda, or lime, or better by the same compounds prepared directly and containing an excess of chlorine. Prurigo of the female labia and various irritable stages of the vagina yield readily to lotions with the chlorate of soda.<sup>13</sup> I have further to add, that I have myself experimental proof of the usefulness of the chlorates in the treatment of a great number of chronic diseases of the skin.

150. Experience has taught us that the *nitrate of silver*<sup>14</sup> may often be employed advantageously as a superficial cautery to the skin, when affected with obstinate chronic inflammation; but it is also known that this active substance, prematurely employed, may be followed by an aggravation of the symptoms it was intended to counteract, and that when indiscreetly applied, it has sometimes caused great alteration in the texture of the integuments, and given rise to indelible cicatrices.

151. M. A. Severinus<sup>15</sup> had recourse, in several cases of lupus, to the *actual cautery*, which had been previously employed by Albucasis in the same formidable malady. Saucerotte details the case of a little girl attacked by an ulcer consequent upon a burn, which he remedied by exposure to the powerful rays of the sun.

152. It is very long since proposals were made to change chronic into acute inflammations of the skin, and thus by modifying their nature and accelerating their progress, more speedily to bring about their cure. It was with this view that Hippocrates<sup>16</sup> added cantharides to the ointment called *karikon*, which was used to dress certain ulcers. Celsus<sup>17</sup> also treated severe papulæ by an ointment of cantharides.

<sup>8</sup> Thomson (A. T.). On the employment of the prussic acid as a local application in impetigo (The London Medic. and Phys. Journ., Feb., 1822). Bull. de soc. méd. d'emul., 1822, p. 165.—Bulletin des sciences médicales de Ferussac, t. ix., p. 268.—Revue médicale, l. xvi., 460.—Arch. gén. de méd., l. xvi., p. 289.

<sup>9</sup> Diemann. Doering's Journal für die neueste holländische Litteratur, 1 B. 1 St. p. 40.—Kapp. Bibl. med., XXIV., p. 415.—An extract from the medical annals of Altenburg.

<sup>10</sup> Bulletin des sciences méd. de Ferussac, fevr.—1824, p. 153.

<sup>11</sup> Chevallier. L'Art de préparer les chlorures, in-8. Paris, 1829, p. 201.

<sup>12</sup> Gazette de santé du 15 Decembre, 1827.

<sup>13</sup> Notice sur l'emploi du chlorure de soude en médecine. (Extr. du Bull. des sc. méd. de Ferussac, l. viii., p. 91.)

<sup>14</sup> Home (Everard). Practical Observat. on the treatment of ulcers, etc. 8vo. London, 1793.—Guillemeau (L. G.). De l'emploi du nitrate d'argent fondu dans le traitement externe de quelques maladies, in-4o. Paris, 1826.—Cox. Lond. Med. Gaz., v. x. p. 672. Jobert (de Lamballe). Emploi des caustiques dans le traitement des maladies de la peau (Journ. hebdomadaire, 2e série, l. vi., p. 119). Velpeau. Emploi des caustiques dans le tr. des mal. de la peau. (Nouv. rev. med., l. iv., p. 425.)

<sup>15</sup> M. A. Severinus, de efficacia medic. Francf., 1646, in-fol., p. 255.

<sup>16</sup> Hippocrates, lib. de ulceribus, p. 515, ed. Fœs.—Œconomia Hippocr., Art. καρικον.

<sup>17</sup> Celsus. De papulis, lib. v.

<sup>1</sup> Bulletin des sciences méd. de Ferussac, l. xi., p. 315.

<sup>2</sup> Grille et Morellet. Mémoire sur l'oxyde de Manganèse dans les maladies cutanées (Actes de la société de médecine de Lyon, l. ii., pp. 62-65.)—Sylvy. Quelques vues sur l'emploi de l'oxyde de Manganèse dans le traitement des maladies cutanées.—Morellet. Sur le même sujet (Annales de la société de médecine de Montpellier, l. iii., part. i., p. 262).—Villard fils (Actes de la société de santé de Lyon, l. ii., p. 112).

<sup>3</sup> Journal de Leroux, l. xvi., p. 128.

<sup>4</sup> Nouvelle bibliothèque médicale. 1828, l. 3, p. 453.

<sup>5</sup> Hippocrates Opera omnia, in-8. 2 vol. ed. van der Linden. Lugd. Batav., t. i., 606. De humidorum usu.

<sup>6</sup> Kinglake. Medic. and Physical Journal, 1802, p. 11 et suiv.—Agricola. Comment. in Poppium, de vitriolo, p. 547.

<sup>7</sup> Alyon. Essai sur les propriétés médicales de l'oxygène, in-8o., 1791.



Galen<sup>1</sup> advises us to excite suppuration in points of the skin affected by obstinate disease (lupus, mentagra), by means of a mixture of cantharides and hellebore, incorporated with grease and a variety of other articles. Paulus Ægineta, and particularly Aetius, have advised the same practice, which was revived by Paré<sup>2</sup> when, upon the recommendation of Hollerius, he ordered a blister to be applied to the face of a woman affected with rosacea. Several other pathologists have had recourse to applications of cantharides in lepra, lupus, and psoriasis. Lorry was witness to the same disturbing means successfully resorted to by a quack. I have myself had frequent and successful recourse to it; but I have always preferred ordering repeated small blisters, to the application of a single large one, where there was a considerable extent of diseased integument to be treated. It is proper to remember, that the patient of Paré suffered a violent fit of delirium.

M. Blin thinks that the meloe proscarabeus made into an ointment with grease, is more useful than any other remedy in the treatment of common cutaneous diseases (*dartres*); and he has proposed to try this salve in tinea.<sup>3</sup> Selle, before this, however, had recommended the same means, which causes the diseased parts to which it is applied, to suppurate as a preliminary to their cure.<sup>4</sup>

Poultices of house-leek (*sempervivum*), and of the greatercelandine (*chelidonium majus*), the juice of the euphorbiaceæ and of other acrid plants, the leaves of the clematis vitalba, the root of the imperatoria, ostruthium, &c., are also occasionally used to stimulate certain chronic inflammations of the skin.

153. The essential oil of turpentine<sup>5</sup> has been tried in some cases of tinea, and of old ulcers, and the animal oil of Dippel<sup>6</sup> has been found efficacious, applied externally, either pure or mixed with common oil, in some cases of phagedenic tinea, and of scrofulous sores. Poncelet had already recommended it, particularly in the latter malady. The remedy ought always to be used mixed with water, or combined with some greasy substance; for when applied pure to inflamed surfaces, it is apt to cause violent headaches. The oil of cajeput, and the petroleum, either alone, or mixed with other substances, have been given internally, in properly regulated doses, and with success, in some obstinate cases of skin disease.

154. Blisters are now and then made use of to divert an eruption of the face or some quarter where it is very troublesome, to another region where it is less apparent or annoying. I have thus succeeded several times, in transferring to the arm or thigh, eczemas that had broken out on the ears, and on the genital organs. In less successful instances, the blisters have only caused new eruptions, without displacing the old ones. It is always proper to establish the drain, before venturing to employ drying or discutient remedies.

155. Blisters<sup>7</sup> are further useful in restoring any eruption, the disappearance of which has shortly preceded attacks of internal disease. It is occasionally indispensable to apply the blister to the very place which the eruption had occupied.

A servant girl was admitted into the Hotel-Dieu, complaining of a sore throat of several months' standing. There was no apparent inflammation of the parts about the fauces, but they appeared drier than usual; on learning that the pain in the throat had followed the disappearance of an eruption (*dartre*) from the fore part of the neck, the physician, M. Bourdier, ordered a blister to be applied to this region; on the morrow, the patient found herself much better, and the dryness of the throat was gone. Having quitted the hospital immediately, she neglected to keep the blister open, and was compelled to return within a fortnight, on account of a renewed attack of her indisposition. Another blister applied to the same spot, was followed by the same happy effects as in the first instance. M. Bourdier now thought of replacing the blister on the neck by one on the arm, but no sooner had the former healed up than the throat again became parched.

Blisters were in succession applied to the shoulders, and to the nape of the neck, but in vain; so that at length it became necessary to apply a third to the immediate seat of the eruption.<sup>8</sup>

No case more conclusive than this as to the point proper to be selected for the application of blisters in skin diseases, can well be imagined.

156. Blisters, so generally prescribed as drains in chronic inflammations of the skin, are almost always hurtful when the disease extends over a considerable district of integument. For children, and occasionally for adults, we prefer the wood of the daphne mezereum, which causes an oozing of ichor, analogous to that of eczema, to the use of the cantharides. I have sometimes imitated the practice of Jaeger<sup>9</sup> in eczema of the hairy scalp, with advantage.—This practice consists in applying blisters to the arms, and keeping them long open.

Electricity is occasionally used as a stimulant in skin complaints in the same manner as blisters.

157. After the sudden disappearance of a spontaneous inflammatory affection of the skin, when any internal disease is set up, the happiest effects are sometimes derived from the use of caustic issues.<sup>10</sup> I have seen subjects sprung of parents who laboured under eruptive diseases of the skin, and who had, without any evident cause, fallen into an indifferent state of health, recover their strength materially after the application of one of these drains.

158. Besides the direct action which it is proper to keep up in the part of the integuments immediately affected in diseases of the skin, it is further very generally necessary to effect some modification in the constitution of those labouring under them. It is to this slow, deep, and searching action, that a multitude of medicines owe their reputation and efficacy. So that the opinion held of old by Oribasius, that the complete cure of skin diseases was not to be accomplished without internal or general treatment, is now very commonly admitted.

159. I have derived the greatest benefit from venesection in numerous chronic inflammations of the skin. Several practitioners restrict the measure of abstracting blood, in affections of the skin, to cases occurring in the strong and lusty, or in subjects of a sanguine or bilious constitution.<sup>11</sup> For myself I declare that I have repeatedly had recourse to blood-letting, with the greatest advantage, even when it seemed to be contra-indicated by the general state of the patient, particularly in elderly persons suffering from sleeplessness caused by prurigos, lichens and eczemas, that had resisted all other treatment. Avicenna long ago recommended the same practice.

In chronic states of inflammation of the skin, the blood is commonly buffy, even in the aged. This condition of the circulating fluid ought to be taken into account, as its appearance might incline us to recur to blood-letting oftener than is really necessary; and we must be very guarded not to change this state of the blood too rapidly by the repeated use of the lancet; the constitution of the patient would inevitably suffer: and further, as I have frequently had occasion to observe, the blood, becoming more and more serous, might, nevertheless, preserve its disposition to coagulate with the buffy coat, and thus lead to serious mistakes. In general, the bleedings ought not to be repeated but at somewhat distant intervals, once a month for instance, and at the periods of menstruation in females labouring under skin complaints, which have been preceded by amenorrhœa or dysmenorrhœa.

160. When recourse is had to blood-letting, the patient ought to be put upon a strict regimen. He ought to have some wild vegetable decoction for his usual drink, and to make habitual use of baths and gentle aperients. Mercurialis<sup>12</sup> managed herpes and lichen during their whole course, by means of diet, general bleeding, leeches, and baths. Some pathologists, however, regard regimen as the mere preparatory treatment to a regular course of purgatives. Others,

<sup>8</sup> Bouchard. Essai sur l'emploi des derivatifs externes, in-4. Paris, 1816, p. 55.

<sup>9</sup> Jaeger (J. Ch.). Fünfzig praktische chirurgische Cautelen für angehende Wunddaerzte. Frankfurt am Mein, in-8. 1788-1792.

<sup>10</sup> Pujol. Maladies chroniques de la peau, t. ii., p. 201.—Lorry. De morbis cutaneis, p. 325.—Kreysig. Hufeland's Journ. der praktischen Heilkunde, xvii B. p. 126.—Watson. Journ. de med., tom. lxxxiii., p. 342.

<sup>11</sup> Venæ sectio, quæ, in biblosis atque actuosis constitutionibus nunquam omittenda, nocere tamen potest in languidulis atque inertibus. (Lorry. De morbis cutan., p. 323.)

<sup>12</sup> "Etiam si non adsint indicia mittendi sanguinis." (Mercurialis. De morb. cutan. De Lichenibus, p. 78, in-4. Leyd., 1623.)

<sup>1</sup> Galen. De composit. med. secund. loc., lib. v., cap. 8.

<sup>2</sup> Paré (Ambr.). Œuvres complètes; in-fol., lib. xxi. Des venins, p. 790.

<sup>3</sup> Mémoires de la Société Linnéenne du Calvados, t. i., p. 94.

<sup>4</sup> Neue Beiträge zur Natur und Arzneygelahrtheit. Berlin, 1781, in-8., trad. en Français par Coray. Montpellier, 1796, 2 vol. in-8.

<sup>5</sup> Biblioth. med., t. lx., p. 128. Gazette de santé, No. 21, Septembre, 1818.

<sup>6</sup> Bulletin des scienc. médic. Août, 1818.

<sup>7</sup> Buchner. Diss. de vesicatoriorum ad exanthemata a nobilioribus partibus evocanda efficacitate. Halle, 1758.—De Meza. Diatrib. med. tres. Hafniæ, 1775.



reversing the order of this system, prescribe laxatives and clysters before blood-letting. Some prefer combining the action of purgative medicines and of blood-letting, with the occasional use of the tepid bath, the times and occasions of its employment being regulated solely by the state of the digestive organs and of the skin. This last method I hold applicable in a greater number of cases than any of the former. Lastly, to these various plans some have proposed the addition of certain external remedies known by the name of *styptics* and *repellants*, prepared of nut-galls, alum, acetate of lead, &c.; and we are occasionally obliged to have recourse to such measures. Hallé<sup>1</sup> has proposed a method analogous in all respects, with the exception of the bleedings, and which consists essentially in the combined action of purgatives and the warm bath.

The practice of treating chronic inflammations of the skin by the use of purgatives alone has been generally but improperly entitled *Hamilton's method* in France. Besides the fact that there is no mention made of these diseases in this author's book,<sup>2</sup> the practice is very old, and a physician of the name of Joubert<sup>3</sup> wrote particularly upon the subject. It requires to be carefully pursued even when the digestive apparatus appears to be healthy.

Incautiously employed, purgatives sometimes induce a state of morbid irritability in the intestinal canal, followed by reaction of the skin;<sup>4</sup> or they excite chronic inflammations of the stomach and bowels which are difficult to treat, and apt to bring on incurable alterations in the tissues of these parts. It was the fear of these consequences, or *metastases*, as they were termed, that led Van Helmont to reject the use of cathartics entirely in the treatment of diseases of the skin. The same apprehension has of late very much circumscribed their exhibition in France, [in England, however, there is no such reserve; and] I must allow it to be an unquestionable fact that the artificial gastro-intestinal inflammations excited by purgative medicines subside from the moment the action of these remedies is suspended, if the irritation be not kept up and rendered permanent by some individual peculiarity or *idiosyncrasy*.

161. Mild *aperients* or *laxatives* are frequently employed in the treatment of diseases of the skin. Weak infusions of rhubarb sweetened with manna for children, the different saline purgatives, the sulphates of soda, of potash and of magnesia, the tartrate of potash and soda, the sulphate of potash with sulphur, in the dose of one or two drachms in a large quantity of water, or some mild mucilaginous fluid, as also any of the common saline mineral waters, have all essentially the same effects, and fulfil the same general indication.

Sulphur and calomel are also employed as aperient medicines, and, like other purgatives, when prescribed along with a suitable regimen and the use of the tepid bath, are often of service.

162. The ancients regarded active purgatives as very effectual medicines in diseases of the skin: Galen, in the case of a woman labouring under an affection of this description, which was stated to have resisted remedies of every kind, when he learned that purgatives had not been tried, prescribed the strongest *cholagogues*, and in a few days the patient recovered.<sup>5</sup> The rashness of empiricism sometimes gains a triumph over the reserve of the better informed physician: the *powder of Nillaud*<sup>6</sup> has accomplished cures without number. Such results ought to inspire us with greater confidence in this method of treatment, from which I have myself derived the greatest advantages. Whilst prescribing active purgative medicines, we must beware of harassing the constitution of the patient too much, and above all of inducing disorders more serious than the one we are combating.<sup>7</sup>

Oribazius<sup>8</sup> and Aretæus<sup>9</sup> have recommended the *hellebore* in Greek

elephantiasis, and several other diseases of the skin. Galen<sup>10</sup> is said to have cured the leprosy by a copious bleeding, the warm bath and hellebore. Paulus Ægineta<sup>11</sup> employed the same medicine externally. Celsus advises the *black hellebore*, and, in modern times, Schmiedell used the extract of hellebore successfully in two cases of Greek leprosy; Fabricius Hildanus, by the same means, cured a young girl labouring under a very severe affection of the skin; Willan prescribed the tincture of hellebore in the treatment of squamous inflammations; Smith has seen good effects from the ointment of hellebore externally, and the tincture internally; according to Swediaur, fomentations with the decoction and tincture of hellebore, are useful in psoriasis, prurigo and tinea; Bigelow, in inveterate cases of skin disease, recommends a trial to be made of the ointment of the *helleborus viridis*. I am sorry to add that these results, so favourable in appearance, are really of little value. In the first place, there is great obscurity as to the species of hellebore made use of by the ancients,<sup>12</sup> and a serious error was committed when substances so dissimilar as the *veratrum album* and *helleborus niger* were included under the same common denomination. In the hospital of La Charité, I have prescribed the powder of the *helleborus niger* in doses of from 60 to 80 grains, and the tincture of the same plant in quantities of three drachms, without producing the slightest disorder in the digestive functions, or any trace ensuing of modification in the appearances and symptoms of many different affections of the skin. The *veratrum album* must be made the subject of farther experiments.

163. The *gratiola officinalis*<sup>13</sup> has often been used as a purgative in the dose of half a drachm or a drachm in infusion, or of 20 or 30 grains in powder, in the treatment of skin diseases. This plant has even been said to be efficacious in venereal ulcers of the nose and throat; and M. Delavigne has seen it used with success in scabies and several other cutaneous affections. Stoll and De Haen were in the habit of combining *gratiola* with the sublimate in venereal affections generally.

164. The *alkalies*,<sup>14</sup> particularly the liquor potassæ, in doses of 20 or 30 drops, and lime-water,<sup>15</sup> were prescribed by Willan in several, especially squamous, forms of cutaneous disease.

The *subcarbonate of soda* and the *subcarbonate of potash*, in doses varying from a few grains to half a drachm or a drachm in a pint of vegetable infusion, or combined with sulphur, have been tried in several cutaneous affections. *Ammonia*<sup>16</sup> and its subcarbonate have been employed more especially in diseases presumed to be of a syphilitic nature. The subcarbonate is prescribed in doses of 10 or 15 grains, twice a day.

165. The *acids* are more generally and unquestionably useful than the alkalies. Each of them has properties peculiar to itself; in proof of which I can quote the specific action exerted by the sulphuric acid<sup>17</sup> on ulcerated eczema and lichen agrius, and that by the nitric acid on impetigo and pityriasis. The diluted sulphuric acid of our pharmacopœias may be prescribed in doses of from 10 to 20 or 30 drops, two or three times a day, in any convenient vehicle, such as barley-water properly sweetened. Much larger doses than these may, however, be prescribed without impropriety. I have myself given as much as a drachm, and Mursinna has gone the length of even half an ounce daily. The patients ought to swallow these large doses, properly diluted, by little at a time, and even to drink some pure water afterwards, until the stomach becomes accustomed to the medicine.

<sup>10</sup> Galeni. Art. curat. ad Glaucom, lib. ii.

<sup>11</sup> Pauli Æginetæ Opera, lib. iii., chap. ii.

<sup>12</sup> Paulel. Remarques sur l'hellebore des anciens (Journ. gén. de médecine, l. liii., p. 410).—Hannin. Note sur les hellebores des anciens (Journ. gén. de méd., t. xlv. p. 75-192).

<sup>13</sup> Delavigne (G. F.). Diss. *gratiola officinali ejusque usu in morbis cutaneis*. Erlange, 1794, in-4.

<sup>14</sup> Blane. Transactions of a Soc. for the improv. of medical and chirurgical knowledge, vol. ii.—Michell. Medical Repository, vol. iv., n. ii., art. 9.

<sup>15</sup> Delharding (G. C.). Diss. de aquæ calcis vivæ interno usu salutari in specie in morbis exanthematicis chronicis. Rostoch., 1746, in-4.

<sup>16</sup> Ancien Journal de Médecine, l. xli., p. 387.—t. xliii., p. 248.—Peyrilhe. Remède nouveau contre les maladies vénériennes, tiré du regne animal, ou Essai sur les verus des alcalis volatils, in-8. Paris, 1774.

<sup>17</sup> Hume (F.). Clinical experiments, histories and dissections. London, 1781, 8vo.—Darwin. Zoonomia, iii.—Fosbroke. On the use of the dilute sulphuric acid in cutaneous diseases. (The London Medical and Surgical Journal, June, 1822.)

<sup>1</sup> Hallé. Mem. de la soc. roy. de médec., in-4, tom. viii., p. 314.

<sup>2</sup> Hamilton. Observations on the utility and administration of purgative medicines, 8vo. Edinb., 1805.

<sup>3</sup> Joubert. Quæst. med. 5, 6.—De affectibus pilorum et cutis, etc., 12mo. Geneva, 1572.

<sup>4</sup> Boëhmer. Diss. de purgantibus chronica cutis exanthemata nonnunquam exacerbantibus. Halle, 1764.

<sup>5</sup> Galeni Method. med., lib. xiv., cap. 17.

<sup>6</sup> A French quack medicine, the nature of which I have not been able to discover. From the text we may judge it to be some active purgative.—R. W.

<sup>7</sup> Tum demum providendum ventriculo et intestinis, ne aliquod inflammatorie irritationis signum in pessimum degeneret phlogosin. (Lorry. De morb. cut., p. 335.)

<sup>8</sup> Oribazius. Collectanea art. medic. Paris, 1556, in-8., lib. vii., et lib. viii., cap. iii. et vi.

<sup>9</sup> Aretæi. Opera, ed. Boerh., in-fol., p. 136.



The utility of the *hydrochloric (muriatic) acid*, diluted with water and administered in grit gruel, decoction of elm-bark, or of dulcamara, has been acknowledged by good and credible practitioners. This acid is usually prescribed in the dose of a drachm or a drachm and a half to the pint of fluid, with an ounce of sugar.

*Nitric acid*,<sup>1</sup> more energetic than sulphuric acid, has been chiefly employed in syphilitic cases. Alyon prescribed the pure acid to the extent of a drachm in two pounds of water, half a glassful to be taken at a time, every two hours, and sucked through a tube to protect the teeth. The strength of this acid varying in the shops from 20° to 42° of the acidometer of Baumé, it is always necessary to indicate the degree of concentration in the prescription. The various sherbets prepared with *acetic acid*, or with the *citric* or *tartaric* acids, are agreeable diluents, rather than very active therapeutic agents.

166. The *preparations of antimony*,<sup>2</sup> first tried in the cutaneous diseases of animals, and afterwards applied by Basil Valentine to the treatment of the same affections among men, have been the subjects of numberless experiments. They are most generally combined with other medicines of a more or less active nature; and I shall take care to mention the most reputed of these compounds when I treat of the diseases in which they have been more especially recommended.

167. The *sulphuret of antimony*, made use of in chronic diseases of the skin by Baldinger and Vögler, and in scabies by Hermann and Tissot, forms the basis of a multitude of quack remedies against skin complaints. Cullen prescribed this substance in the dose of from half a drachm to a drachm, during several successive weeks, without perceiving any effects from its use. In one or two cases only, in which it was given in a very *large dose*, did it excite nausea and vomiting. I have myself ordered it in doses of one, two, and three drachms during the course of twenty-four hours, without any benefit, but also without causing derangement of the digestive organs. It is, therefore, subject of astonishment to observe the care that is taken to adjust and reproduce formulæ in which the sulphuret of antimony is administered in the dose of four, six, or eight grains. As to the remote effects which the sulphuret of antimony exerts on chronic diseases of the skin, they have appeared to me much less conspicuous than such as followed from the *rest* enjoined and the *regular lives* led by the patients in our hospitals; circumstances that mingle with and complicate all our experiments, and that are too often overlooked or neglected by therapeutic inquirers.

The same remarks are applicable to several other preparations, such as the *antimonial ethiops* of Huxham,—a mixture of antimony, mercury, and flowers of sulphur, which has been especially recommended in the treatment of scrofulous complaints. So are they likewise to the ointment of sulphuret of antimony, the effects of which used to be boasted of in several skin diseases, but which never seemed to me to have any other action than that of impure lard. The sulphuret of antimony, as I have said, is often combined with other remedies of greater or less efficiency. Hufeland prescribed it along with sulphureous baths and decoction of dulcamara in doses of a scruple three times a day gradually increased to half an ounce; and this was done successfully, for at the end of six weeks the patient found herself free from the skin disease under which she had previously laboured.

The *decoction of a certain quantity of the sulphuret of antimony* is a much more active medicine than a like amount of the substance in powder. M. Guibourt boiled an ounce of the sulphuret of antimony in sixteen ounces of water till half the fluid was consumed. The filtered liquor, having the hydrosulphate of potash and hydrochloric acid added to it, let fall one grain and 8-10ths. of dry sulphuret of arsenic, which correspond with a grain and 44-100ths. of arsenious acid. This transformation of an insoluble sulphuret of arsenic, which exists mixed with the sulphuret of antimony, into a soluble and singularly active medicine explains how the decoction of the sulphuret of antimony becomes more energetic than the sulphuret itself. I have seen patients take, during several days, half an ounce of the sulphuret

of antimony without feeling any effects from the medicine, but they were rather severely purged by a decoction of only two drachms of the same substance. And it may well be imagined that three-fourths of a grain of arsenious acid could not be taken with impunity at a dose, and this is the quantity of this active poison which the amount of impure sulphuret of antimony specified yields to boiling water.

168. The beneficial effects of those magistral formulæ entitled *tisan of Feltz* and *decoction of Arnoult*, sometimes employed in the French hospitals in diseases of the skin, particularly in those of a syphilitic nature, appear to me owing to the formation of a certain quantity of arsenious acid. These tisans, however, are never identical, for the purity or impurity of the sulphuret of antimony employed, as well as the mode of preparation, makes it impossible they should ever twice contain the same kind or amount of ingredients. Other accidental circumstances may also seem at times to give the sulphuret of antimony properties which it does not possess in fact; the ingestion for example of a mineral acid after a dose of the sulphuret will almost always excite vomiting.

The *sulphuret of antimony* and *mercury* (antimonial ethiops) possess almost the same properties as the crude antimony.

The protoxide of antimony in the dose of the tenth of a grain triturated with sugar and James's powder, has been recommended in diseases attributed to the recession of inflammations of the skin.

169. The *antimonial wine of Huxham* used to be in great vogue in England in cutaneous affections.<sup>3</sup> M. Fages<sup>4</sup> informs us that he treated some of these diseases successfully by the tartar emetic in doses gradually increased. A patient of M. Fages, affected with skin complaints, took, during the first day he was under treatment, half a grain of the tartrate of antimony and ten grains of dulcamara; the dose was gradually increased, and at the end of a hundred and seventy-two days, the patient was taking every day, at two different times, thirty-two drachms of the extract of bittersweet and thirty-two grains of the emetic tartar. Another patient similarly affected took towards the fortieth day twelve drachms of the extract of dulcamara and ten grains of the tartrate of antimony. A third patient by degrees obtained the point when he was consuming eighty-five grains of the extract of rhus radicans and sixteen grains of tartrate of antimony every day.

Several patients whom I have put on this plan, beginning with a grain of the tartrate, were either attacked with diarrhœa or vomiting; others had a number of liquid stools daily; a few only were found who could bear the medicine; but I never got the length of the immense doses of M. Fages. These cases, at all events, prove that habit is an unequivocal cause of the endurance of remedies. In the same manner, and in the same kind of cases as those in which M. Fages prescribed his medicines, some practitioners have tried the effects of an electuary composed of five grains of the extract of poisonous sumac and a grain of tartar emetic.

170. *Embrocations* and *lotions* of the tartrate of antimony have also been employed to bring several chronic inflammatory affections of the skin into a more active state, and to accelerate their termination. Sir W. Blizard applied a solution of the antimonium tartaricatum in tinea,<sup>5</sup> and Dr. Temina<sup>6</sup> prescribed with good effects the same medicine in small doses to the wet-nurses of infants at the breast who were affected with a similar disease. M. Recamier<sup>7</sup> treated successfully a case of gutta rosea with an ointment of the tartrate of antimony.

171. The *chloride of antimony* is used as a caustic in anthracion or malignant pustule; and *Kermes mineral* (the hydrosulphate of antimony) enters into the composition of several salves contrived for diseases of the skin.

172. When chronic inflammations of the skin are set up in weak or scrofulous constitutions, or otherwise, when such diseases are preceded by dysmenorrhœa, amenorrhœa or chlorosis, the principal indication is to modify the constitution, and then the *preparations of iron* are the medicines of most avail: I shall quote many cases in

<sup>1</sup> Alyon. *Essai sur les propriétés médicales de l'oxygène*, 8o. Paris, 1797.

<sup>2</sup> Basil Valentine. *Triumphwagen des Antimonii*, 8o. Leipsick, 1604.—Brisbane (J.). *Select cases in the practice of medicine*. London, 1772, 8vo., p. 45.—Bell. *On Ulcers*, 8vo. Edin., 1778.—Chambon de Montaux. *Observ. clinicae*. Paris, 1789.—Desault. *Journal de Chirurgie*, t. iii.—Gugesell. *Hufeland's Journ. der pract. Heilkunde*, xi. b.—Hufeland. *Die Skrofelkrankheit*. Tr. en Fr. par Bousquet, in-8. Paris, 1821, p. 171.

<sup>3</sup> Huxham. *Observations on antimony*, p. 60.—J. Brisbane, l. c. p. 45.—Adair. *Medical commentaries*, vol. ix., p. 35.

<sup>4</sup> Fages. *Mémoire sur l'efficacité du tartrate antimonie de potasse combiné aux extraits de douce-mère et de rhus radicans, dans le traitement des dartres*. (Recueil périod. de la soc. de med., t. vi.)

<sup>5</sup> Blizard. *Lond. Med. Journ.*, vol. viii., 1787.

<sup>6</sup> *Annali univ. medicinae*. Luglio, 1829.—*Revue Médicale*, 1829, t. iii., p. 493.

<sup>7</sup> *Biblioth. medic.*, t. lvii., p. 340.



support of this opinion. Bateman has recommended small quantities of chalybeate wine as well as other preparations of iron to children attacked with impetigo and strophulus. Chalybeate medicines have often appeared to me to be useful in cases of purpura hemorrhagica.

Various *chalybeate mineral waters*<sup>1</sup> have been lauded in the same circumstances. Carmichael<sup>2</sup> has praised the *carbonate of iron* even in cancerous affections; I have tried it several times in cancer of the skin, always unsuccessfully as the disease itself was concerned, but occasionally with advantage to the general constitution of the patient.

173. *Graphite* or *plumbago*,<sup>3</sup> looked upon some years ago as a carburet of iron, now regarded as a kind of carbon or coal containing accidentally some admixture of iron, has been used in the treatment of chronic affections of the skin, from a remark made at Venice, that the workmen employed in the manufactory of pencils were speedily cured of any cutaneous diseases they might have been labouring under when they begun this business. M. Marc informs us that he has used this substance in obstinate herpetic affections. Hufeland also details the case of a lady forty-one years of age labouring under rosacea which resisted every other means, but yielded to the internal and external use of plumbago. In his report from 1817 to 1818 he speaks of the good effects of this remedy. It is administered internally in doses varying from twelve grains to a drachm daily in any form,—powder, electuary or pill; occasionally it is combined with sulphur, and with some mercurial, as the sublimate. The stomach bears the medicine readily, and it is said greatly to increase the secretion of urine after its use has been continued some days; two or three ounces are said to be enough to cure the most obstinate cases. Externally it is best applied mixed with some unctuous body. Contradictory accounts of the value of the plumbago as a medicine have been published in the Medical Journal of Salzburg.<sup>4</sup> My own mind is not yet made up on the matter; I have not had experience enough to enable me to judge.

174. The *preparations of mercury* are universally employed in affections of the skin, both internally and externally.

Geber, Meuse and Rhases are held the first who prescribed *mercurial ointments* in cutaneous affections and ulcers, against pediculi, &c. Employed by Theodorice and Guy de Chauliac in scabies, herpetic eruptions, different species of tinea, plica, frambæsia, and elephantiasis, and subsequently applied by Jacobus Berengarius Carpus and Fallopius to the treatment of venereal affections, various *preparations of mercury* were afterwards administered internally by Vigo, and have not since ceased to be extensively employed in the practice of medicine.

175. *Mercury* in the metallic state, intimately combined with grease, soap, or some vegetable conserve, in the dose of four, six, or eight grains, is a powerful remedy, the action of which, in syphilitic cases, and in some other affections of the skin, is most remarkable and most beneficial. Mercury administered in this form is a much better medicine in general than when rubbed into the system in the shape of an ointment. United with several other substances, mercury has been forced into an immense variety of forms, each possessed of a different degree of activity. It is now found united with sulphur, and now with sulphur and antimony,—the latter, a form that has been recommended by Hufeland, in chronic eruptions of the skin during childhood. Lastly, the black powder called *Ethiop's mineral*, which is produced by combining a quantity of mercury with twice its weight of sulphur, has been tried with some success in several forms of cutaneous disease.

176. Since the experiments of Lalouette were published,<sup>5</sup> cinnabar fumigations have been had recourse to with evident advantage in inveterate syphilitic and other obstinate affections of the integuments, by directing the vapour through a funnel to the affected parts, or ap-

plying it by means of a close box to the surface of the body generally. The quantity of cinnabar used at each fumigation is from half to a whole drachm, and the process is repeated every two or three days. Carelessly administered, cinnabar fumigations are capable of causing accidents of a serious nature.

Mixed with camphor and some unctuous substance, cinnabar forms an ointment that has been recommended in several herpetic eruptions, and against pediculi. It has been prescribed externally by way of friction,<sup>6</sup> and internally in small doses in the treatment of impetigo.

177. The *proto-chloride* and *deuto-chloride* of *mercury* (calomel and corrosive sublimate) enter into the composition of almost all the antihpetic ointments which we find preserved in pharmacopœias and formularies. In the cases communicated to Riverius, we find two of syphilis cured by the use of calomel. Willan and Bateman made extensive use of these preparations in the treatment of cutaneous diseases, and certainly many cases have been successfully combated by their means.<sup>7</sup> I believe myself to have been one of the first who observed that the white precipitate (calomel obtained by precipitation) mixed with lard in the proportion of a drachm to an ounce of grease, applied in frictions to the affected parts in the quantity of one, two, or three drachms daily, exerts a specific power over two forms of squamous inflammation, namely, lepra and psoriasis. I never saw these frictions followed by salivation, which is so frequent a consequence of the internal exhibition, even in very small doses, of calomel prepared in the ordinary way. In this respect, therefore, there is an actual difference between an ointment of precipitated calomel and the common blue or mercurial ointment, the action of which on the salivary glands is constantly the same. I have seen patients labouring under old and inveterate psoriasis use half a pound of precipitated calomel by way of friction, without their mouths becoming in the slightest degree affected, and obtain a perfect cure. Calomel, taken internally, in the dose of five, six, eight, ten, twelve, sixteen, or twenty grains, is commonly followed by several dejections; but besides this action, it exercises another and not less remarkable influence on the constitution. As an alterative, in greatly diminished doses it often excites salivation, sometimes after a very small quantity only of the medicine has been taken. I shall give several cases which prove that calomel applied to the pituitary membrane of the nose, has the power of curing syphilis. In combination with the sulphuret of antimony (Plummer's pill), with the golden sulphuret, or sub-hydrosulphate of the same metal, calomel enters into the composition of a multitude of formulæ, that have possessed and still retain a certain reputation. In fine, calomel internally, and corrosive sublimate externally have been recommended together in many forms of disease of the skin.

178. The *deuto-chloride of mercury*<sup>8</sup> is the basis of a great many simple and compound medicines. Brisbane showed how eminently useful this active substance might become in the treatment of diseases of the skin, when other mercurial preparations had failed to do good. Lorry and many other practitioners have confirmed these fortunate results by their success. I am in the habit of using the sublimate with advantage in the treatment of chronic and obstinate eczemas, in smaller doses, too, than are usual in syphilitic cases. During its use, patients ought particularly to avoid exposure to cold and moisture. I have sometimes combined the action of purgatives with that of the sublimate.

*Sublimate baths*, (from two drachms to one ounce in two hundred pounds of water,) conceived by Baumé, have been particularly applied to the treatment of syphilitic affections; and this mode of administering mercury has been extolled by M. Caffé and M. Wedekind, who have proposed a particular formula for the purpose (half an ounce

<sup>6</sup> Werneck. Traitement de la syphilis par les frictions cinnabrées. (Rev. med., 2e. Ser., t. 1, p. 120.)

<sup>7</sup> Vacquie. Journ. complém. du Diction. des scienc. medic., t. xxxi., p. 255.

<sup>8</sup> Cotton (S.). An herpeti, licet non venereo, sublimatum corrosivum, Parisiis, in-4., 1772. Hoffmann. Diss. de mercurio in affectibus cutaneis. Argentorati (Wittwer Ph. L.). Collect. Diss. Argent. ii.—Brisbane. Observ. and inquir. by a Society of Physicians, v. i., n. 149.—Caffé. Avantages des bains mercuriels dans le traitement des maladies cutanées et vénériennes, in-4. Paris, 1815.—Wedekind. p. 275.—Bulletin des scienc. medic. de Ferussac, t. xx., p. 237.—Amelung. Emploi extér. du sublimé dans les maladies de la peau (Bulet. des sc. med. de Ferussac, t. xviii., p. 63).—Miguel. Inconveniens du sublimé dans les maladies de la peau (Arch. gen. de med., t. xvi., p. 290).

<sup>1</sup> Marcard (H. M.). Beschreibung von Pyrmont. Leips., 1784, 1785, 2 Bde., in-8o., 2 B., p. 106, 1-3.—Brandis. Erfahrungen ueber die Wirkung der Eisenmittel in allgemeinen und des Driburger Wasser ins besondere. Hannover, 1803, 8vo.

<sup>2</sup> Carmichael (R.). Essay on the effects of carbonate and other preparations of iron upon cancer. 2d edit., 8vo. Dublin, 1-09.

<sup>3</sup> Weinhold. Der Graphit als neu entdecktes Heilmittel gegen die Flechten, in-8. Leipsik, 1809.—Hufeland. Troisième rapport de l'institut polyclinique de Berlin, 1-12.—Heim. (Horn Archiv., 1810, marz., 327.)

<sup>4</sup> Salz. med. chir. Zeit., 1809, 1, p. 337.

<sup>5</sup> Ancien Journ. de Med., tom. xiv., p. 19.



of sublimate and the same quantity of muriate of ammonia to each bath). I have many times prescribed these baths, and have never seen salivation follow their use; but their good effects have also often appeared to me to be very questionable. I have never ventured to order them in a case of scirpiginous ulcerated syphilis, fearing that the sublimate might be absorbed in too large a quantity. The length of time during which the baths are taken, the state of the skin, and especially the degree of aptitude for absorption possessed by the integuments, necessarily influence the advantages and inconveniences of mercurial baths.

179. The sublimate has been employed as a *lotion* in scabies; Gowland's lotion has still some reputation in England in rosacea.—At the Hospital St. Louis, a solution of a drachm of sublimate in a pound of water coloured with *alkanet* root is used as a common wash to cutaneous affections, especially when they are suspected to be connected with a venereal taint. Serious consequences are said to have followed the application of compresses imbibed with an empirical wash, analogous to the preceding in its composition. Concentrated solutions of corrosive sublimate are sometimes used to destroy condylomata. I have already mentioned mercurial pediluvia in the treatment of syphilitic affections.

180. M. Werneck has tried the *bromate of mercury*<sup>1</sup> in cases of obstinate skin complaint. I have not myself any experience of the effects of this compound.

181. The *iodates* or *iodurets* [*iodides*] of *mercury* are energetic preparations, the effects of which have appeared to me eminently beneficial under many circumstances, particularly in chronic tubercular and papular inflammations of the skin. They are especially available in the treatment of syphilitic affections complicated with scrofula. The *deuto-ioduret* is even a more active preparation than the corrosive sublimate itself. Externally applied, it has sometimes been found sufficient to leave the deuto-ioduret in contact with the skin for a while, to induce a most intense erysipelatous inflammation.—When it is given internally, it is proper to begin with the sixteenth part of a grain, and to raise the dose gradually to an eighth; very rarely will it be prudent to exceed a quarter of a grain.

The *proto-ioduret of mercury* which is less energetic in its action than the deuto-ioduret, is used internally, under the same circumstances, in doses of half a grain, which may be gradually increased to one or two grains. Externally, I sometimes make use of an ointment of the proto-ioduret of mercury, to aid the resolution of the tubercles of lupus, of rosacea, of syccosis, &c.

182. The *cyanuret* [*bicyanide*] of *mercury*,<sup>2</sup> extolled by Chaussier and by Horn, has recently been recommended by Dr. Thomson, mixed with lard, in rosacea, eczema, and several other chronic inflammations of the skin. This substance has such powerful effects on the animal economy, that the first doses ought not to exceed the sixteenth part of a grain in amount, when it is prescribed internally.

183. The *red oxide of mercury* enters into the composition of a multitude of ointments, which are often employed with advantage in chronic inflammatory affections of the skin.

184. The *proto-nitrate of mercury*, mixed with lard, has also been employed, by way of inunction, in the treatment of many diseases of the skin. Dissolved in water, it has been applied successfully in porrigo, and the diseases attended with pediculi.

185. The phagedenic inflammation of lupus exedens, and of scirpiginous syphilitic affections, is often stopped by one or more applications of the nitrate of mercury with the acid in excess.<sup>3</sup> A drachm of the proto-nitrate of mercury is dissolved in an ounce of nitric acid; a pencil dipped in this solution is the best means of applying it to the diseased surface. In case a greater effect is desired, a compress of lint, steeped in the solution, may be maintained in contact with the sore for any length of time. Many cases of lepra and inveterate psoriasis have been cured by this treatment.

186. The *sub-deuto-sulphate of mercury* (turpeth mineral) which has been mentioned as a preservative against small-pox, has been

successfully employed internally in the treatment of many obstinate skin complaints in doses of one-fourth of a grain repeated two or three times a day. The dose may be gradually increased to two or three grains. By mixing this preparation with lard in the proportion of one to eight, an ointment is formed that may be often advantageously employed in stimulating certain chronic affections of the skin, particularly psoriasis of an old and inveterate character.

187. The *preparations of gold*<sup>4</sup> have been found available in the treatment not only of syphilis but of favus, and of some other chronic inflammations of the hairy scalp. They appear particularly well adapted for inducing modifications in the constitution of scrofulous subjects attacked with skin disease. M. Chrestien has detailed the mode of exhibiting these preparations, which I shall notice by and by when I speak of syphilis, eczema and pityriasis.

188. The *preparations of arsenic*<sup>5</sup> appear to have been used for the first time in Europe, in the treatment of diseases of the skin, by Adair, and Girdlestone, of Yarmouth. The latter tried the arsenical solution of Fowler, in a case of lepra in which he had existed during fourteen years, and the patient recovered under the influence of small but repeated doses of the medicine. He informs us that he subsequently obtained hundreds of cures of lepra, prurigo, psoriasis and tinea. The second case of lepra in which he tried arsenic, exhibited phenomena that particularly attracted his attention. After three doses, each of eight drops of the solution, the whole body of the patient became as red as a lobster, and the face appeared as if it were attacked by an incipient erysipelatous inflammation. The use of the medicine was immediately suspended till the redness of the skin subsided, and it was then only resumed in doses of half the former amount, under which the leprous affection gradually disappeared. In a third case, the cure of the leprosy was preceded by an eruption of large bullæ on the hips. The curative effects of the arsenical solution indeed were often observed to be preceded by an increase of the eruption, by a crop of blebs, or by chaps in the skin of the feet and toes, and of the hands and fingers. A patient who had laboured for two years under *lepra nigricans* which appeared in large patches on the cheeks, and had resisted various plans of treatment, was put upon four drops of the arsenical solution twice a day: the first dose produced a great degree of redness of the skin, tension of the belly, and a slight fainting fit. The patient found relief from a grain of calomel, and the lepra was subsequently got rid of by two drops of the solution taken twice a day during six weeks. Having suffered a slight relapse, the patient resumed the medicine in doses of four drops, which caused the same disagreeable effects as at first; but he ultimately recovered without any inconvenience under the continued use of the solution in doses of two drops at a time. The largest dose of Fowler's arsenical solution Girdlestone ever thought advisable to prescribe, was twelve drops three times a day. Six drops, however, he afterwards found to be a sufficient dose for all good purposes. Although he sometimes succeeded within a few days in lessening the severity of the symptoms of the skin disease, he found by experience that he could not consider the cure as accomplished, under any dose to which the medicine could be carried with propriety, unless its use were continued during six or seven weeks at least. One patient took the arsenical solution in the dose of twenty drops three times a day for more than three months before the lepra under which he suffered disappeared. This patient had many nervous symptoms, fainting fits, attacks of diarrhœa, &c.; accidents which, in spite of the greatest care, continued during several weeks. Weakness, pains of the abdomen, nasal hemorrhage and cough, as also hepatic and dropsical symptoms, all accompany or follow the ill-regulated exhibition of this powerful medicine. Too strong doses cause the urine to acquire a jaundiced appearance. When the bowels are constipated, the arsenical solution suffices occasionally to render the motions regular, and when diarrhœa comes on, a quarter of a grain of opium two or three times a day corrects this effect of the medicine. It is always proper to begin the use of arsenical medicines in very small doses, never to be tempted to carry the ordinary solution beyond five or six drops three times a day, and

<sup>1</sup> Bullet. des Sc. medic. de Feruss., t. xxiv., p. 20.

<sup>2</sup> Horn. Researches in practical medicine, in German, p. 550; Svo., 1813.—Bulletin des sc. med. de Ferussac, t. v., p. 262.—Parent. Sur les effets du cyanure de mercure dans le traitement des affect. syphilitiq. (Revue médicale, 1832, t. iii., p. 833).

<sup>3</sup> Godart. De l'emploi du nitrate acide de mercure, in-4. Paris, 1826.

<sup>4</sup> Niel. Recherches et obs. sur les préparations d'or, in-8. Paris, 1821.

<sup>5</sup> Adair. Medical commentaries of Edinb., v. ix., l. p. 35.—Girdlestone. Lond. Med. Phys. Journ., February, 1806.—Harles (Ch.). De arsenici usu in medicinâ, in-8. Norimb., 1811.



to persevere in its use so long only as it is unattended by evil consequences. In children the doses must be smaller—one, two, or three drops, once or twice a day.

The arsenical solution is a remedy that has been greatly abused in squamous affections of the skin; Mr. Duffin, however, has employed it in many cases along with a decoction of dulcamara, of mezereon bark, or of sarsaparilla with advantage. He supposes that small doses taken at short intervals are more useful and more certain in their effects than larger doses at longer intervals. It is rarely necessary in this way to prescribe more than ten drops of the arsenical solution three times a day, six are generally found sufficient, and before long—ten or fifteen days at most—the effects of the medicine are apparent not only on the disease, but on the constitution of the patient. The first symptom the medicine produces is a sensible acceleration of the pulse, which, under its continuance, may be found to have risen from twenty to thirty pulsations per minute above its ordinary rate. The pulse further acquires fulness and hardness; the patient soon begins to complain of tingling sensations in different parts of the body, itching and pain of the eyes, &c.; the eyelids, especially the lower, become puffed, and the eye is surrounded by a slight dark and livid circle. These symptoms sometimes precede the acceleration of the pulse. If the remedy be still persisted in, the patient complains of weakness of stomach, pains of the bowels, and sometimes of shooting pains in the chest; the tongue becomes white, the countenance alters, and the expression acquires a sorrowful cast; anxiety about the præcordia, and other distressing symptoms supervene at last and compel the use of the poison to be suspended—these symptoms, indeed, show that it has been continued too long; it should always be abandoned when the acceleration of the pulse and swelling of the eyelids are observed.

The physicians of America have also tried the arsenic in several forms of cutaneous disease. Dr. Rush prescribed the arsenious acid in the shape of pills in various severe affections of this nature. The dose he ordered was the 15th, the 10th, and the 8th of a grain twice a day, mixed with soap, causing the patients at the same time to make use of an infusion of the *eupatorium perfoliatum*. M. Valentin, who makes us acquainted with this fact, has seen several patients follow the plan of treatment indicated above, during more than two months without any good effects on their disease, but also without any apparent alteration of their health. Willan and Bateman also extolled the effects of Fowler's arsenical solution in obstinate cases of lepra, of lichen, of prurigo and of porrigo. They assure us it may be administered with perfect safety if cautiously managed; but they do not appear to have studied its special effects on the constitution with the same care as Fowler and Girdlestone.

In the reflections on the use of arsenic, read before the Lyceum of Philadelphia, in 1812, by Dr. I. Redman Coxe, the author, after having combated the repugnance that is generally felt to the use of this medicine, relates the case of a lady who had laboured under leprosy during fourteen years without deriving any benefit from every kind of the most active treatment, but who recovered under the use of the arsenical solution continued for two years and a half, and taken at last in doses of fifty drops three times a day. There was this peculiarity in the case, that just as the disease was beginning to yield, the patient could not take more than five drops of the solution three times daily without having tumefaction of the face, nausea, loss of appetite, sense of weight in the eyes and head,—symptoms that proclaimed the necessity of suspending the large doses for a season. (a) Dr. Otto, of Philadelphia, published about the same time an account of three cases of obstinate eruption which had resisted the use of sulphur, of antimony, the corrosive sublimate, and mercury in other shapes, pushed till the mouth was affected, but which yielded to the arsenic. Two years afterwards there was not the slightest appearance of the disease, and no trace of ill consequence from the use of the medicine. Dr. Bardsley, of Manchester, has also employed Fowler's solution in cutaneous diseases; but he dissuades from the too long continuance of the remedy, as he fancied he had observed the arsenic to accumu-

late in the system and to produce bad effects, such as flying pains, flatulence, paralytic affections of the limbs, &c. M. Fodéré<sup>2</sup> used Fowler's solution with success in some obstinate cases of skin disease. A gentlewoman, thirty years of age, exposed, from the particular circumstances in which she was placed, to many privations and hardships, was, among other complaints, affected with an obstinate sealy eruption (*dartre ecailleuse*) of the hands, which obliged her to work in gloves. This patient had in vain tried remedies of all kinds. The first effect of the arsenic, which was at length prescribed, was to regulate the menstrual function that had long been disturbed, to render the breathing free, and the complexion clearer; but as yet the disease was untouched, although a considerable quantity of the medicine had already been taken. M. Fodéré, however, desired its use to be persisted in, and at the end of a month he was desired to visit his patient whom he now found labouring under bronchial affection, with bloody expectoration; at the same time the disease of the skin had disappeared, and the hands were perfectly whole. The present more pressing malady was treated by soothing remedies, and the arsenic was discontinued for a month. After this period the skin complaint reappeared, but the patient having again resumed the arsenic, the hands were anew restored to their natural condition, with the exception of a slight degree of remaining roughness of the skin.

189. M. Jourdan has collected, under the head *Arsenic*, in his *pharmacopée universelle*, almost every preparation of this metal that has ever been employed in medicine; but I have contented myself by giving those only among my *formule*<sup>3</sup> which have been more particularly recommended in diseases of the skin. I have been particularly attentive to indicate the occasions proper for the employment of these energetic remedies, to specify their respective doses, and to show their physiological and therapeutic agency, their advantages, and their occasional ill effects. Certain chronic and obstinate forms of eczema of the scrotum, margin of the anus and labia, are, of all the vesicular inflammations, those in which arsenical medicines are most frequently and most successfully employed. This class of remedies ought never to be had recourse to in exanthematous inflammations; they are also rarely useful, and sometimes dangerous, in chronic bullous inflammations. Among the papular inflammations, the circumscribed, the confluent, and chronic lichens occasionally require their use. They have been often abused in prurigo, in pityriasis, psoriasis, and lepra, which they, nevertheless, sometimes attack with success. When these diseases are inveterate, the prolonged and continued action of arsenical medicines is apt to alter the mucous membrane of the digestive organs, and to implicate the constitution without modifying the diseased conditions of the skin for which they were especially prescribed.

190. I shall have occasion to analyze the observations of Mr. Robinson, and those of Mr. (I.) Wilson, on the use of arsenical preparations in the treatment of the Greek elephantiasis. Experience has taught me, that not only are the deep alterations of the skin which characterize this disease externally not removed by these medicines, but that they sometimes even cause disorders and grave complications when their use is persevered in for several months continuously, or alternated with other active remedies. In one case of Greek elephantiasis, M. Delpech administered Fowler's solution without any benefit during two months; the only effects it had were to cause a diminution of appetite, slight purging and some emaciation.

191. Independently of the changes which arsenical preparations may produce in the digestive organs, and of the tremors and paralytic affections of the limbs, observed by different authors, the following case, as well as two others I possess of the same kind, tends to show that, administered unseasonably, they may induce true paralysis of the genital organs. I had under my charge, in La Charité, a letterpress compositor, twenty-three years of age, in La Charité, a letterpress compositor, twenty-three years of age, labouring under lepra and chronic enteritis. Although of weakly constitution, this man had hitherto enjoyed perfectly good health. He had been attacked about five years before by lepra vulgaris on the knees and elbows, but by degrees the disease extended to all the other parts of the body. During the first two years, the disease was treated by simple baths, by baths

(a) See, also, a paper on the same subject by Dr. D. Theodore Coxe, in *North. Am. Med. & Surg. Journ.*, vol. viii.

<sup>1</sup> Medical Reports, &c. London, 1807.

<sup>2</sup> Journ. compl. des sc. médic., t. 1, p. 117.

<sup>3</sup> These will be found at the end of the volume.



of sulphur and other preparations of this mineral. During the third year the patient tried various remedies, and was at last put upon the use of Fowler's solution, which he took in doses gradually increased from five to twenty drops, for three months. Shortly after having undergone this treatment, he began to complain of pains in the stomach, his digestion was disturbed, he lost his strength, he was taken with a profuse diarrhœa, and his genital organs were completely paralyzed. This state of affairs had already lasted eighteen months, and the patient told me that the diarrhœa was excited afresh by the slightest freedom in diet.

Preparations of arsenic imprudently applied to the exterior may also occasion serious consequences. A young woman having made use of an arsenical ointment to her hair for the purpose of destroying the pediculi with which she was infested, was attacked five or six days afterwards with a tumefaction of the whole head; the ears were double their natural size, and covered with incrustations; the sub-maxillary and cervical glands, even the parotids, swelled rapidly; the eyes were sparkling and prominent, the face puffed and almost erysipelatous; the pulse was hard, the tongue dry, the skin hot and parched, and the other symptoms of violent fever were present. The patient, in addition, suffered from vertigo, a sense of approaching syncope, cardialgia, vomiting at intervals, scalding in making water, obstinate constipation of the bowels and tremors of the limbs, with inability to rise into the erect posture. At last delirium was added to the list of other ills. A copious bleeding was immediately practised, which was ordered to be repeated in the night if the symptoms seemed to require it. Diluents of chicken broth, emollient clysters, pediluvæ, &c., were prescribed, and the head was rubbed with an ointment containing a fourth of its weight of chalk in fine powder. Next day there was some improvement, but also considerable disposition to somnolence. A few leeches were applied to the thighs. The succeeding night was restless; the tumefaction of the head seemed to have increased, and towards morning the whole body, and particularly the feet and hands, were observed to be covered with a pretty copious eruption of small pimples with white heads, like millet seeds. The patient was very weak, and could not sit up without uneasy feelings about the præcordia. Laxative medicines were now exhibited, and within forty-eight hours the eruption dried up, and fell off afterwards in scales; the bowels became open, and all the symptoms abated. During her convalescence the patient lost her hair.<sup>1</sup>

192. To recapitulate:—arsenical preparations are most energetic medicines, of incontestable use in various severe forms of cutaneous disease. They act especially on the digestive organs, on the integuments, and on the nervous system, as the observations published on their operation and curative effects demonstrate. These preparations ought to be prescribed internally at first in very small doses—the 16th of a grain of the white oxide of arsenic, for instance, once or twice a day, for an adult,—a dose that may be gradually increased to an 8th, a 6th, or a 4th of a grain, but very rarely further, although a whole grain has been given; in this quantity, however, the remedy may act like a poison. Before venturing on the use of arsenic, it is proper to be certain that the digestive organs are perfectly healthy and not disposed to become permanently deranged under the influence of a stimulating plan of treatment, especially if this is proposed to be continued for some time. Prudence occasionally requires us to administer these medicines ourselves, and not to entrust our patients with more than very small quantities of them at a time. Their effects on the digestive organs and nervous system ought to be sedulously watched every day; should the doses we have adopted or attended to, cause any unpleasant symptoms, they must be lessened or suspended for an interval, and when they bring on pains in the epigastrium, constriction of the throat, anxiety about the præcordia, spasms, sickness, diarrhœa, &c., their use must be given up entirely: this is better than attempting to subdue these symptoms by narcotics. In treating chronic diseases of the skin by arsenical medicines, the fact must always be borne in mind, that the sensible effects of these remedies, slow and silent at the beginning, may suddenly acquire greater intensity and prove the cause of lesions more or less severe in their nature.

If it be allowable cautiously to try every known means in the treatment of rebellious diseases, it would be culpable temerity to persist for too long a time in the use of remedies possessed of such energetic actions on the economy, that they are apt themselves to become the cause of serious disorders.

193. The obstinate characters which the chronic diseases of the skin occasionally present, have led to some bold experiments on the internal use of *cantharides*. Employed in the time of Pliny, and not always with the best effects,<sup>2</sup> in lepra and the lichens, recommended by Avicenna and Mead,<sup>3</sup> in the treatment of Greek elephantiasis, and more recently<sup>4</sup> in various other cutaneous diseases, cantharides is a medicine which, in the shape of tincture, is now very frequently employed in lepra, psoriasis, and several other chronic affections of the skin. I shall be particular through the course of this work, especially when treating of lepra and psoriasis, in insisting on the precautions which are requisite not to turn, at the very outset, an active remedial agent into a deadly poison. I may, however, just observe here, that if it be well proved that the tincture of cantharides has often caused the disappearance, in a few weeks or months, of certain skin complaints, which had resisted every other form of treatment, it is not less certain that patients have occasionally taken even as many as 150 doses, of 10, 15, 20, and 30 drops of the medicine, and that others have used it uninterruptedly during several months, without deriving from it any benefit whatever. It is impossible to overlook the circumstance, also, that whatever the skill and care of the practitioner in the exhibition of this medicine, the genital and urinary organs will, in a greater or less degree, always become affected. I have seen some patients worn out by painful erections, and others labouring under unequivocal symptoms of inflammation of the bladder in consequence of its use. Females in general bear this medicine much worse than men.

To complete this review of the many therapeutical experiments to which the diseases of the skin have given occasion, I have still to speak of a great number of vegetable substances whose curative effects in these complaints have been admitted on grounds of different degrees of worth and stability.

194. Various species of *asclepias*<sup>5</sup> (*Asc. Gigantea*, *Asc. Vincetoxicum*, Linn.) have been recommended in the treatment of lepra, of frambœsia, of elephantiasis, and other obstinate cutaneous affections.

195. Knakstedt has published, in the memoirs of the academy of St. Petersburg, a notice in which he shows that the root of the *elecampane* (*Inula Helenium*, Linn.<sup>6</sup>) administered internally, and applied externally, is extremely efficacious in eruptions and other diseases of the skin. In many districts this root, reduced to powder, and incorporated with grease, is a popular remedy in scabies.

196. Sudorific properties, of some avail in cutaneous affections, have been ascribed to monkshood or *aconite* (*Aconit. Napellus*, Linn.<sup>7</sup>). Tommassini has, however, prescribed the extract of aconite in doses varying from 10 to 90 or 100 grains daily without success in a case of syphilitic eruption (*dartre syphilitique*). On the other hand, we have accounts of the aconite, even in small doses, producing serious accidents, lypothymia, vertigo, general tremor, &c. I have tried the drug myself, not only in diseases of the skin, but also under other circumstances; and I find that the medicinal extract of monkshood varies extremely in its action, according as it is procured from the aconite of the hills or from that cultivated in gardens, according likewise to the care with which it has been prepared and preserved. I find further

<sup>2</sup> "Cossinum, equitem romanum, amicitia Neronis principis notum, cum is lichene corruptus esset, vocatus ex Ægypto medicus ob hanc valetudinem ejus a Cæsare, cum cantharidum potum præparare voluisset, interemit. Verum illitas prodesset non dubium est, cum succo taminæ uvæ et sero ovis vel capræ—efficacissimæ omnes ad lepras lichenasque." (C. Plinii Secundi. Hist. mundi, lib. xxvii. Lugd., 1587, p. 719.)

<sup>3</sup> Mead's Works, 3 vols. Medica sacra, chap. ii.

<sup>4</sup> Home. Clinical Researches, p. 471.—Smith. In Medical Commentaries, vol. i., n. 6.—Cullen. Materia Medica, vol. ii.—Brisbane. In Med. Obs. and Inquiries by a society of physicians. London, v. viii., p. 5.

<sup>5</sup> Bulletin de la Société philomathique, t. i., p. 184, 2e part.—Plaisfair. Sur le Madar et ses propriétés.—Arch. génér. de médec., t. xvii., p. 574.

<sup>6</sup> Kuhn. Phys. Med. Journal, 1800, p. 139.—Ambrose Paré recommends an ointment of elecampane and mercury. (Œuvres, liv. vi. c. 14.)

<sup>7</sup> Pallas. Voyages dans différentes provinces de l'empire de Russie; t. v., p. 389.—Tommassini (Gazette de santé, 21 mars, 1816.)—Journ. gén. de méd., t. vi. p. 186.—Rayer. Art. Aconit. (Diction. de médec. et de chirurg. prat., in 8o. Paris, 1829).

<sup>1</sup> Recueil périodique de la société de méd. de Paris, t. vi., p. 22.



that it rarely produces similar or salutary therapeutical effects, given in such doses as medicines of the same class are usually prescribed.

Proposals have been made to combine the aconite with the deutocloride of mercury, in the treatment of syphilis.

197. Stoerck has advised the extract of the *anemone pratensis*<sup>1</sup> in several diseases of the skin in doses of one or two grains daily. M. Bonnet has succeeded in curing obstinate eruptions (*dartres*) by the exhalation, twice a day during some months, of one grain and a half of extract of anemone mixed with eight times its weight of sugar. The affected parts were washed with a decoction of hyoscyamus and of hemlock. Chomel speaks of applying the anemone *nemorosa*, Linn., to the head in cases of tinea. Other observations have been published in favour of the anemone *pulsatilla*.

198. A decoction of the root of the bur-dock (*Arctium Lappa*, L.)<sup>2</sup> in the proportion of one or two ounces to the pint of water, has been used with some advantage in inflammation of the skin that had gone into the squamous or furfuraceous state. The use of this decoction requires to be continued for several months, as it only acts with extreme slowness. It seems to have been a frequent practice formerly to apply the leaves of bur-dock bruised to the head in chronic affections of the hairy scalp.

199. *Hemlock* (*Conium maculatum*, Linn.)<sup>3</sup> has been recommended not only in various less formidable shapes of skin disease, but also in the treatment of scrofulous [and even of cancerous] sores; Joannes Vigo, in the 16th century, was the first who employed this plant in herpetic affections, (dans les dartres,) and this is one of the forms of skin disease, in which Stoerck has recently found it most beneficial. Hufeland prescribes it both internally and externally in affections of the hairy scalp: Murray only ventured on its outward use.—Syphilitic affections have been subdued by the officinal hemlock.

200. In a number of diseases the principal indication is often to effect some modification of the general constitution; this indication, indeed, at times absorbs all the others. We have consequently been recommended to treat those complaints to which people of a scrofulous, lax, and lymphatic habit are subject, by the juices of the cochlearia officinalis or scurvy grass, of the cochlearia armorica or horseradish, of the water-ress (*sysimbrium nasturtium*), by watery infusions and beer of the hop (*humulus lupulus*), of the buck-bean (*menyanthes trifoliata*), of the stone crop (*sedum acre*) house-leek, (*sempervivum teetorum*), &c. On the same principle decoctions of Peruvian bark, of the Virginian snake-root, &c., were employed to sweeten the blood, and remedy the cachectic state of constitution observable along with the appearance of impetigo scabida in elderly people, and of rupia and ecthyma luridum, at all ages.

201. J. Bauhinus employed the *colchicum* externally to destroy pediculi of the head and pubes. Dr. Elliotson<sup>4</sup> cured a man sixty years of age of prurigo, in three weeks by the use of half a drachm of vinum colchici three times a day. I have obtained some success myself from the use of the tincture of colchicum, in several cases of lichen complicated with hereditary gout or rheumatism.

202. A great number of cases collected by Carrere, Razou, Bertrand-Lagrèsie, Crichton, and other physicians, leave no doubt as to the value of the *Dulcamara* or bitter-sweet (*Solanum Dulcamara*, L.)<sup>5</sup> in the treatment of eczema, and squamous inflammations of the skin. If Messieurs Desbois and Alibert failed in deriving the same good effects from this medicine, their want of success must be attributed to their having used it in too small doses, or to their having made but short trial of its efficacy; for if the dulcamara produces no good in some cases, it is certain that in others its beneficial influence is speedily

apparent. Neither must it be forgotten that whilst simple psoriasis of the elbows and knees often withstands the freest exhibition of this substance, chronic inflammations of the same kind, extending to large surfaces of the integuments, are frequently seen yielding readily to doses much smaller in amount. In every case the dose of the remedy should be gradually increased. I have used as much as four ounces of the root in decoction in the course of four and twenty hours, and from two scruples to two drachms of the extract in the same interval of time.

Baths of decoction of dulcamara have been recommended in the same kind of affections as those in which the decoction and extract have been given internally, and especially in those syphilitic eruptions which have withstood the influence of mercury. I have never studied the action of these baths.

203. Galen, Oribazius, Ætius, Avicenna, and Mesue, among the ancients, and among the moderns, Gilbert, Pinel, Sprengel, and others, agree in considering the herb *fumitory* (*fumaria offic.* Linn.)<sup>6</sup> as useful in scaly tetter, and even in elephantiasis. The expressed juice usually exhibited, during two or three months in the spring, in doses of from two to six ounces, may be subsequently increased to twelve. Menuret prescribed the extract of fumaria combined with hemlock and calomel. I have myself sometimes employed this plant medicinally, but always in union with other remedies of different degrees of energy, a circumstance that prevents me from giving an opinion upon its peculiar properties.

204. M. Loiseleur de Longchamp prescribed with success the leaves of the *Daphne gnidium*,<sup>7</sup> the use of which had already been recommended by Russel, Wright, and Swediaur, in diseases of the skin. Cullen tells us that he had seen numerous ulcers of the skin persisting after a mercurial course, get well under the use of the decoction of this substance continued during two or three weeks. Sinclair has made some experiments on the *Daphne mezereum*, which Rouch exhibited combined with gum benzoin. On the other hand Wedel and Hoffman have lifted their voices against the daphne gnidium, reproaching it with having caused burning heat of the stomach, cardialgia, shooting pains of the bowels, hypercatharsis, &c. I have seen, and have myself prescribed the decoction of the bark of this plant to many patients; and whilst I allow that several experienced such symptoms as those I have just mentioned, I have still to add that in no case were they so violent as to make me regret having given the medicine a trial.

205. *Tar-water*<sup>8</sup> is a very ancient internal remedy in chronic diseases of the skin. In the Pharmacopœias of Edinburgh, Dublin and the United States of America, formulæ for different unguents and liniments as external applications, into which tar enters as an ingredient, may still be found. I commonly mix one part of tar and four of hog's lard to make an ointment, which I often find to prove effectual in papular inflammations, and especially in prurigo. Pitch has been exhibited internally in a dose of from half a drachm to half an ounce every day, in chronic ecthyma, and several inflammations of a squamous nature.

206. Those vegetables characterized as *sudorifics*,<sup>9</sup> such as sassafras, sarsaparilla, guaiacum, &c., are powerful remedies in syphilitic and several other cutaneous affections. In our practice these substances are commonly exhibited in too small doses; I have pushed them advantageously to the length of 6, 8 or 10 ounces daily in decoction during one or two months.

207. The infusion of the Acorn,<sup>10</sup> and of the Galium aparine; the juice of the *Ceanothe crocata*, the extract of the bark and husk of the *Juglans regia*,<sup>11</sup> the decoction of the bark of the *Ulmus campestris*, and especially of the *Ulmus pyramidalis*,<sup>12</sup> of the *Rumex patientia*, *Rumex acutus*,<sup>13</sup> and stems of the *Viola tricolor*,<sup>14</sup> infusions of the

<sup>1</sup> Murray. Appar. medicam., t. iii., p. 93.—Bonnet. Ancien journ. de med., t. lvi., 416.—Ixx., p. 823, 1783.—Chomel. Plant. usuelles, t. ii., p. 376.

<sup>2</sup> Chambon de Montaux. Observat. clinic. Paris, 1789.

<sup>3</sup> Paré (Amb.). Œuvres, lib. xvi., c. 2.—De Préval. Journ. de med., t. xxxviii., p. 139.—Fouquet. Gazette de Gardanne, p. 113.—Landentte. Journ. de méd., t. xxvi., p. 335.—Wauon. Journ. de méd., tom. lxxxiii., p. 342.—Despine. Journ. gén. de médecine, t. xxxviii., p. 437.

<sup>4</sup> Lond. Med. Gazette, v. ix., p. 31.—Arch. génér. de méd., t. xvi., p. 270.

<sup>5</sup> Linnæus. Diss. de dulcamara, in-4o. Upsal, 1771 (Amœnit. acad. v. viii., No. 156).—Carrere (J.-B.-F.). Traité des propriétés, usages et effets de la douce-amère ou solanum scandens, dans le traitement de plusieurs maladies et surtout des maladies dartreuses, in-8. Paris, 1781.—Bertrand de Lagrèsie. Essai sur le traitement des dartres, avec des observations sur l'efficacité de l'extrait de douce-amère, in-12. Paris, 1784.—Gardner. Emploi de la douce-amère dans les maladies de la peau (Arch. génér. de médecine, t. xxv., p. 267).

<sup>6</sup> Otto (B. C.). Diss. de fumaria. Traject. ad Viad. in-4, 1799.—Menuret. Journ. de méd., tom. i.

<sup>7</sup> Manuel des plantes usuelles, part 2, p. 46.

<sup>8</sup> Bateman. A pract. synopsis of cutaneous diseases, in-8, 1829, p. 83.

<sup>9</sup> Akakia. Ergo cutaneis affectibus hydratica? Paris, 1879.—Hufeland. Journal der prakt. Arzn., ii. b., p. 188.—Home. Clinical researches.

<sup>10</sup> Péron. Journ. compl. des sciences médicales, t. xliii., p. 337.

<sup>11</sup> Hunezovsky. Anc. journ. de méd., t. lxxvii., p. 296.

<sup>12</sup> Banau (J. B.). Hist. nat. de la peau, in-8. Paris, 1802.

<sup>13</sup> Aertzi. Curatus, diuturn. ii., c. 13.

<sup>14</sup> Haase. Diss. de viola tricolori, p. 105.—Oberneffer (Hufeland Journ. der prakt. Heilkunde, ix. b.).



*Ledum palustre*,<sup>1</sup> and of the *Rhododendron chrysanthum*; the extract of the leaves of the *Rhus toxicodendron radicans*<sup>2</sup> in the dose of fifteen to twenty grains three or four times a day, carried, within the space of six weeks, to the extent of from half to a whole ounce in the four and twenty hours; the decoction of different species of *Scabiosæ*, as of the scab. succisa, scab. arvensis, and their juice in doses of two, three or four ounces, and various other vegetable extracts, infusions and decoctions, have been recommended in skin diseases, of various characters and appearances.—Although I have collected a certain amount of practical information on the action of these substances, I have still many doubts unresolved as to the peculiar effects and degrees of efficacy, in a therapeutical point of view, of many of them: it will be seen, however, that I have made the study of their properties a particular subject of attention, and that I have constantly endeavoured to discover the circumstances which render their exhibition more rational, and their usefulness less a matter of uncertainty than it is.

208. I shall conclude this therapeutical review by a few critical observations.

The numerous and diversified experiments which the obstinacy and frequent relapses of cutaneous diseases have provoked, are unquestionably not without their importance; but it is an abundant mine from which careful study and observation alone teach us to extract the treasure. Moreover, if it be a fact that many remedies, such as purgatives, antimonial preparations, sulphureous and arsenical medicines, &c., are at the present time successfully employed in almost all the chronic diseases of the skin, whatever their form, and whatever the order to which they belong; it is not less evident that more accurate experiments, made under more determinate conditions, that is to say, with reference to well-ascertained species, must be more useful, and more easy of application: such has been, and such necessarily required to be, the end and aim of my own experiments.

From these therapeutical essays, too, there results the sad truth, that obstinate diseases have been opposed by remedies of the most opposite descriptions in their physical and chemical properties; and that, even at the present time, it is often difficult to decide upon the choice of a remedy, or to reason on the propriety of its exhibition.

It is also easy to perceive why physicians who have been struck with the salutary nature of certain inflammatory affections of the skin, and who have observed the evils that sometimes follow their cure or disappearance, or who have felt discouraged with their frequent relapses, have been led to pursue a purely expectant or palliative plan of treatment, or to substitute for these diseases some sort of drain, or issue, or artificial inflammation; a practice which, on the continent, is still frequently followed in the cases of children and elderly persons. Other practitioners have evidently viewed inflammations of the skin as external phenomena, connected with internal conditions more serious and important in their nature, and they have acted on the notion that it was impossible to accomplish their complete cure otherwise than by effecting some great modification of the constitution by regimen and appropriate remedies. To those of a sanguineous temperament and plethoric habit, they have recommended bleeding, the warm bath, milk diet, &c.; to the scrofulous, tonic bitters, preparations of iodine, &c.; to those disposed by descent to herpetic or scaly eruptions, sulphureous, antimonial, arsenical preparations, &c. Other practitioners, without losing sight of the important and even necessary distinction between *constitution* and *disease*, have nevertheless given themselves up to the search after *specific remedies* adapted to each particular kind of skin disease, and to each of its periods; they have insisted on the propriety of the system of expectation, or moderate antiphlogistic plan, in eruptive fevers; on the virtues of mercurial preparations in the syphiliticæ; on those of sulphureous medicines in scabies and chloasma; on the demonstrated usefulness of natural and artificial sulphureous waters in a great number of cutaneous affections; on the advantages of depilation in favus of the hairy scalp; on the good effects of the sherbets of the nitric and sulphuric acids in lichen and prurigo; of the iodurets in scrofulous lupus; of chalybeate medicines in cutaneous inflammations complicated with

amenorrhœa, dysmenorrhœa, &c.; acknowledging, however, that in some obstinate cases recourse must be had alternately to bleeding, purgation, vapour baths, alkaline baths, arsenical preparations, &c., before a permanent cure can be obtained. Others, again, having found by experience the advantages derived from acting on the immediate seat of the disease by means of simple or variously medicated baths and fomentations, lotions, cataplasms, unguents, fumigations, stimulants, cauteries, &c., have insisted on the great value of *external remedies*, which, indeed, are generally efficacious when the alterations of the skin to which they are applied are merely local, or when their action, like that of the preparations of sulphur, of arsenic, of mercury, of iodine, &c., exhibited internally, is extended to the constitution at large, or when they are combined with the internal exhibition of such medicines as exert this powerful influence.

Lastly, it is undeniable that theoretical views have often given particular turns to therapeutical investigations, which have been of service to science. Thus the known uses of purgatives and emetics would not have been discovered at so early a period, without the *bilious* origin attributed by the old writers to diseases of the skin; the inconveniences attending the exhibition of these and other medicines, such as the preparations of antimony, of arsenic, of cantharides, &c., would not have been inquired into so diligently, and exposed with so much zeal, but for the severe attention with which the partisans of the physiological school in these latter days have studied the diseases of the stomach and apparatus of digestion,—without the systematic tendency in this sect to exaggerate the sensibility and the influence of the gastro-intestinal sympathies,<sup>3</sup> previously ill conceived, or entirely overlooked by practitioners, whose minds were too exclusively occupied with the state of the integuments.

To recapitulate:—it is necessary, would we bring the treatment of an affection of the skin to a successful issue, to recall to mind its natural progress; to calculate the probable amount of its beneficial or noxious influence on the constitution, its relations with the general state of health or with preceding diseases, and its affinity to other maladies, whose ulterior appearance is more or less to be apprehended; it is further needful to estimate beforehand the extent of the influence which will be exerted by a change of the diet and general mode of life, not only on the disease, but on the constitution; the effects of age and of climacteric changes must also be taken into account; lastly, from among the therapeutic agents at our disposal, that one must be selected which appears at once best adapted to the individual constitution, and to the nature, severity, extent and date of the disease. As now stated, this problem is more complex than it appears at first sight: the true therapeia of cutaneous diseases must be sought for in the history of their species, and better still in the observation and comparative study of a great mass of particular cases.

## OUTLINES OF THE PATHOLOGY AND REMEDIAL TREATMENT OF DISEASES OF THE SKIN.

BY THE AMERICAN EDITOR.

He who will carefully peruse the "*Introduction*" and "*Preliminary Observations*," to the present work, can hardly fail to acquire an extended view of the general pathology and therapeutics of cutaneous diseases; but as these, by their very fulness, may not, perhaps, be as readily comprehended and distinctly remembered as could be desired, it has seemed to the editor that he might render an acceptable service to the practical investigator into these matters by a condensed summary of the subject, in which it is not, however, his intention to restrict himself entirely to the Treatise of M. Rayer.

Without entering into details of the minute anatomy of the skin, it is enough for us to be aware of the fact, that this portion of the tegumentary system consists of two main layers, viz., the *epidermis* or scarf skin and the *dermis* or true skin. Each of these again is subdivided into other layers; the superficial layer of the epidermis is the cuticle, and the deeper layer, the *rete mucosum* or *rete Malpighii* of older writers;

<sup>1</sup> Linnæus. De ledro palustri. Upsal, 1775.

<sup>2</sup> Dufresnoy. Des propriétés de la plante appelée rhus radicans. Paris, 1788.

<sup>3</sup> I own that I have myself shared and abetted in extending this mistake. Vide Art. Estomac, Dict. de Sc. Med., in 18 vols.



the upper layer of the dermis is named the papillary; the lower one, or sub-stratum, the corium or corion. The epidermis is properly a secretion from the dermis, which it serves to protect. At first fluid, it becomes solid, gradually and in proportion as it is separated, layer after layer. Its inner layer, the *rete mucosum*, is soft and cellular, and in contact with the papillary layer of the dermis, from which latter it receives its form. Breschet and Roussel de Vauzeme, to whose labours we are most indebted for our present knowledge of cutaneous structure, have compared the *rete mucosum*, in its conversion into epidermis, to recently melted wax, one half of which is liquefied by heat, while the other is condensed by the external cold. The cuticle, or external epidermic layer, is laminated in its texture, and as the superficial laminae are continually removed by attrition, new ones are as continually reproduced upon its internal surface. The degree of thickness of the cuticle is dependent on, and bears an accurate proportion to the degree of development of the papillae of the dermis. The epidermis is accurately modeled on the papillary layer of the dermis, and each papilla has its appropriate sheath in the newly-formed epidermis or *rete mucosum*. The colour of the skin, varying in different races, and even people of the same race, is owing to the presence of pigment in the cells of the epidermis. The pigment cells are most abundant in the furrows of the dermis, and in the hollows between the papillae.

In designating the epidermis as a secretion from the dermis, the absence of organization, except of the lowest grade, would seem to be implied, for its connection with the functions of absorption and exhalation are more physical than vital. The assertion of Breschet and Roussel de Vauzeme, that the epidermis becomes organized like false membranes, gives to the former too high a place in the scale of vitality, which it possesses more in the manner of vegetable than of animal organization. We cannot allow much importance to the assertion of Schultze, that he injected with oil of turpentine a very delicate net-work of vessels, which separated with the epidermis from the true skin, since these vessels may have belonged to the sub-epidermic layer, and have been mechanically torn away. (*Müller's Physiology*, Bell's edition, p. 425.)

The dermis or cutaneous tissue proper consists of an interlacement of fibres, in which secreting organs of different kinds are imbedded. It is composed of elastic and contractile fibrous tissue, which is, also, at the same time areolar, and of nerves, blood-vessels and lymphatics. It is white, and never partakes of the colouring matter of the epidermis. Under it are seen the vessels and nerves which penetrate it, and openings for glandular bodies, and, on its external surface, the dermis assumes a membranous appearance, and is perforated for the passage of the secreting and absorbing apparatus.

The papillae consist, or rather the papillary layer, consists of conical minute prominences, arranged in the palm of the hand and sole of the foot in a regular order, in their being collected into little square masses, each containing from ten to twenty papillae, which are disposed in parallel rows.

The special secretions of which the skin is the seat are, in addition to its chief one, the epidermis, the hair, the sebaceous matter, and the perspiration. Hairs are described to be horny appendages of the skin, or processes of the epidermis, penetrating the dermis. They are produced by the involution and subsequent evolution of the epidermis; the involution constituting the follicle in which the hair is enclosed, and the evolution the shaft of the hair. The producing organ of the hair consists of a pulp analogous to a papilla of the dermis, and is the organ whence the hair is produced,—in a manner identical with that of the formation of the epidermis by the papillary layer of the dermis. The colour of the hair, like that of the epidermis, is due to the presence of pigmentary granules contained within the cells. The sebaceous glands are minute branched follicles, imbedded in the substance of the dermis, and often by orifices distributed over its surface. They terminate for the most part in the follicles of the hairs. In the scalp there are two of these glands to each hair follicle. Sebaceous glands are met with in all parts of the body, but are most abundant in the skin of the face, and in those situations which are naturally exposed to friction.

The sudoriferous glands have been already mentioned (Note to p. 25). They are formed by small tubes of peculiar construction, which are spread over the whole surface of the body, and pour out their

secretions by minute pores in the epidermis. Both the sudoriferous and the sebaceous glands are lined by an inversion of the epidermis.

The nails are horny appendages of the skin, identical in formation with the epidermis and hair, but peculiar in their mode of growth. A nail is implanted by means of a root in the fold of the dermis, which acts the part of a follicle to the nail. At the bottom of the groove of the follicle are situated a number of filiform papillae, which produce the margin of the root, and, by the successive production of cells, push the nail onwards in its growth. The papillary structure of the dermis, which produces the nail, is continuous around the circumference of the attached part of that organ with the dermis of the surrounding skin, and the horny structure of the nail is, consequently, continuous with that of the epidermis. For farther details on the minute anatomy of the skin, see Erasmus Wilson's *Practical and Theoretical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Skin*, &c.; also, *Nouvelles Recherches sur la Structure de la Peau*, by M. G. Breschet and M. Roussel de Vauzeme; and *Comparative Anatomy of the Skin of Man, the Domestic Animals, &c.* (*Vergleichende Untersuchungen*, &c.) By Professor Gurlt, in *Müller's Archiv*. A good notice of these two last-mentioned works will be found in the second volume of the *British and Foreign Medical Review*.

If we inquire into the general anatomy of the skin, we discover that this tegument is continuous with the system of mucous membranes, to which it bears a close resemblance, and with which, as some allege, it is actually identical. One important difference, however, presents itself, in the proximate organic principle which constitutes the basis of structure: that of the dermis being almost entirely gelatin, whereas, the basis or proper texture of the mucous membrane is albuminous. In the superadded structures, as of epithelium of the mucous membranes, corresponding with the epidermis of the skin, and in the distribution of blood-vessels, lymphatics, nerves, and glandular bodies or follicles, and in the double series of functions, viz., 1, absorption and exhalation, placing them under the domain of organic life; and 2, sensibility and impressibility to temperature and to the physical properties of matter, connecting them with animal life, there is a close resemblance. The sympathies between the two orders of teguments are active and numerous, both in health and in disease, and they are influential as well in the pathology as in the therapeutics of diseases of the skin.

From the skin carbonic acid and nitrogen are exhaled, as they are from the mucous membrane of the lungs; and from both is discharged a vapour, which, when condensed on the former membrane, with salts, &c., constitutes sweat, and, on the latter, water, with some animal matter. The secretion from the sebaceous follicles of the skin, is paralleled by that from the mucous follicles of the respiratory and digestive membranes.

By the process of absorption, gaseous and fluid matters and notably oxygen gas and water, find entrance through the skin into the general system; as this gas and watery vapour do through the mucous membrane of the lungs. So, also, nearly all the articles of the materia medica may be introduced through the skin into the circulation, and produce their distinctive effects on the several organs, in the same manner, though with less certainty of operation, as when they are applied to the digestive mucous surface.

Analogous depurative functions are performed by the skin and kidneys; and the one sometimes compensates, by its increased activity, for the torpor or suspended action of the other. From both organs are largely secreted water and saline matters, and, in less degree, lactic acid. When the urine is secreted in excessive quantity, as in diabetes, the skin is dry. In hot seasons, and in warm climates, the urinary secretion is less abundant, the cutaneous secretion more so: in winter, the reverse is the case; and, in diseases, the same alternation of action is observed.

The reciprocal influence exerted on each other by the skin and digestive mucous membranes, constitutes a most important part of the study of the pathology of cutaneous diseases. Eruptions of various kinds are not unfrequently a result of crude and irritating ingesta; and those of an acute and febrile character are almost always preceded by derangement of the primæ viæ, and particularly of the mucous membrane of the throat and stomach. So, on the other hand, extensive inflammation of the skin, by arresting its secretion, is fol-



lowed by inflammation of the mucous membranes. Extensive burns have given rise to inflammation of the respiratory and digestive mucous membranes, but in a more particular manner to that of the duodenum. In exanthematous diseases, in which a morbid matter is secreted by the skin, the danger of the superposition of internal inflammation becomes more imminent, not merely in proportion to the suppression of the process by which the morbid matter is eliminated from the blood, but also in proportion to the violence of the inflammation by which the function of the skin is arrested. (*Müller's Physiology, edit. citat.*, p. 459.)

Between the effects, on the skin, of physiological and pathological excitement of parts with which it sympathizes, there is this difference, that while the former is followed by a diminished action of the skin, the latter is most generally succeeded by corresponding, if not identical excitement, or increased and morbid action of this tegument. The therapeutical inference is, that, while we may hope to abate and remove some diseases of the skin, consisting in morbid afflux and congestion, by purging and diuretics, there will be a risk of aggravating them by irritants, which, regarded sometimes as pretended specifics, would light up phlogosis of the digestive mucous membranes.

In its physiological conditions, as of heat and coldness, dryness and moisture, fulness or shrinking, we know that the skin is greatly modified by the nervous system, according as the latter is excited, depressed, or otherwise disturbed. That the prolonged operation or frequent alternation of some of these states will contribute to the production, or, where they are present, to the exasperation of some cutaneous diseases, we can readily imagine, *a priori*, even if direct facts were wanting.

In the *etiology* of cutaneous diseases, we study the causes which act directly on the skin itself, or indirectly, by some organ with which it sympathizes, or through the blood and nervous system, and in this way on the constitution generally. Of the first of these causes, various external irritants, beginning with seasons and climate, and coming down to artificial heat and uncleanly habits, stand out most conspicuously. *Lichen tropicus*, or prickly heat, is a familiar example of the effect of high temperature in causing cutaneous disease, as is *erythema intertrigo* of that of cutaneous friction, and pityriasis or scurf by the repeated friction of the razor on the chin, and sometimes of a rough comb or hard brush on the hairy scalp. In illustration of the occurrence of secondary or sympathetic irritation transmitted from another organ, causing eruption and morbid alterations of the skin, it will be sufficient to mention *urticaria ab ingestis*, or nettle rash from certain kinds of food, particularly shell fish, and *rosacea* from gastro-enteritis. To the same purport, we may cite *strophulus* or red gum, as resulting often from the irritation of teething. The most distressing and remarkable example of cutaneous disease caused by a deprivation of the blood and constitution generally, is in the *syphilides*, or syphilitic eruptions. As is stated by the author in the text:—"In the epidemic syphilis of the 15th and 16th centuries, venereal eruptions occurred so commonly a short time after infection, that the disease was regarded as a *contagious affection of the skin*." From a similar cause, or general constitutional deterioration, come cutaneous scrofulous tubercles.

The question of the hereditariness of certain cutaneous diseases, or at least of strongly inherited predispositions to acquire them, presents itself naturally to the mind of the practitioner. He will find that *acne*, *sycosis* and *porrigo* having occurred in the parents, are very apt to show themselves in the children at an age, and during a period nearly identical with those in which the former had been affected (Plumbe, *A Practical Treatise on Diseases of the Skin &c.*, p. 29, Am. Edit.) *Ichthyosis*, or fish skin disease, has not only been transmitted from parent to child for several generations, but is at times congenital. *Pellagra* has been often observed to appear in those whose parents had suffered from the disease.

Very little reflection must soon convince us, that a knowledge of the causes and connections of many cutaneous diseases, will not a little influence us in our therapeutical views. Thus, for example, when the eruption depends on the irritation of teething, we can have but little hopes of its entire removal, until the process of dentition is completed; nor shall we feel inclined to harass the little patient by various remedies, but wait patiently for the period of irritation to pass,

and with it the sustaining cause of the disease. When, again, we encounter a cutaneous eruption sustained by gastric or by gastro-intestinal irritation, we direct our remedies to this latter morbid condition as to the source of the malady. So, in eruptions depending on constitutional cause we cannot hope for, and ought not to promise, their entire removal until time is allowed for the operation of appropriate remedies, to alter the state of the blood and constitution. This is eminently the case in syphilitic and scrofulous eruptions, and in *pellagra*, and it may be added in a majority of cutaneous diseases. The eruption is properly but a symptom, or at any rate not more than a part of the entire disease.

**CLASSIFICATION OF CUTANEOUS DISEASES.** On this point, the author has detailed the views of his predecessors by which they were guided in their arrangement. Willan, it was stated, followed Plenck in founding his on the external characters of the diseases of the skin when at their acme or height. Plumbe gave his arrangement as "founded on the constitutional causes of the disease, and due consideration of the organic structure and physiology of the part of the skin on which it is seated." It is doubtful if more than an approach to an anatomical basis can be made in the present imperfect state of our knowledge of the several parts of the cutaneous tegument affected in the different eruptions. Reference has been already made, in notes, both by the author and translator of the present work, to Dr. Craigie's distribution of diseases of the skin upon anatomical grounds. It merits more notice than in these passing allusions merely; and as the work containing it (*Elements of General and Pathological Anatomy*) is in the hands of few readers in this country, the American editor believes that he will enhance the value of these "outlines" by introducing it in this place, accompanied by part of the author's commentaries on the several preliminary definitions. Dr. Craigie points out the fact, that Bichat, after the example of Cullen, attempted to distinguish cutaneous diseases according to their seat in the cutaneous tissue. This method, he adds, is obviously the most rational, and has received the approbation of such observers as Meckel and Beclard. The different seats of cutaneous inflammation are briefly stated by Dr. Craigie, as a kind of introduction to his arrangement:

"Cutaneous inflammation, though it eventually affect the substance, which, however, is not frequently, may be conveniently distinguished in the following manner. *First*, it may be seated in the exterior or cuticular surface of the corion; *secondly*, it may affect the *papillæ* or minute elevations of the corion; *thirdly*, it may affect the substance of the corion; *fourthly*, it may occur at the inner or attached surface of this membrane. If these circumstances be adopted as the basis of general division, subordinate characters may be derived from the mode in which the inflammatory process advances, and from the effects which it produces, in the following order:—

**DIFFUSE OR SPREADING INFLAMMATION.**—I. Cutaneous inflammations seated in the outer or cuticular surface of the corion, (*cutis vera, derma*), and generally spreading along it.

Measles,	Rubeola.
Rash fever, scarlet fever,	Scarlatina.
Nettle-rash,	Urticaria.
Rose-rash,	Roseola.
Common rash,	Erythema.

**EFFUSIVE INFLAMMATION.**—II. Cutaneous inflammation seated in the outer surface of the corion, producing a fluid which elevates and detaches the cuticle.

Rose, St. Anthony's fire,	Erysipelas.
Bleb fever, bullose fever,	Pemphigus, febris bullosa.
Simple blebs,	Pompholyx.

**PUNCTATE PAPULAR INFLAMMATION.**—III. Cutaneous inflammations commencing in circumscribed or definite points of the corion, producing minute eminences.

Gum, gown, red gum, tooth gum,	Strophulus.
Sun-rash, prickly heat,	Lichen.
Itchy rash,	Prurigo.

**PUNCTATE DESQUAMATING INFLAMMATION.**—IV. Cutaneous inflammations of the outer surface of the corion, more or less circumscribed, affecting its secreting power, and producing exfoliation of the cuticle.

Scaly leprosy,	Lepra.
Scaly tetter,	Psoriasis.
Dandriff,	Pityriasis.
Fish-skin disease,	Ichthyosis.

**PUNCTATE VESICULAR INFLAMMATION.**—V. Cutaneous inflammations originally affecting the outer surface of the corion, circumscribed, definite, or punctate, producing effusion of fluid, first pellucid, afterwards slightly opaque, with elevation of cuticle, with or without further affection of the corial tissue.

Miliary rash,	Miliaria.
Shingles, vesicular ringworm, or fret,	Herpes.
Heat spots, or red-fret,	Eczema.



Limpet shell vesicle and scab,	Rupia.
Cow-pox vesicle,	Vaccinia.
Chicken-pox,	Varicella.
<b>PUNCTATE PHLEGMONOUS OR PUSTULAR INFLAMMATION.—VI. Cutaneous inflammation originally affecting the outer surface of the corion, afterwards its substance, and producing purulent matter more or less distinct.</b>	
Small pox,	Variola.
Plague,	Pestis.
Mal-gouti pustule, Persian fire,	Anthraxion.
Itch,	Scabies.
Moist or running tetter,	Impetigo.
Scall or pustular ringworm,	Porrigo.
Great Pox,	Echyma.
<b>PUNCTATE CHRONIC PHLEGMONOUS INFLAMMATION.—VII. Cutaneous inflammations originating in the substance of the corion, sometimes at the bulbs of the hair, and terminating in partial or imperfect suppuration, with formation of scales, crusts, &amp;c., and more or less destruction of the corial tissue.</b>	
Boil,	Phyma, furunculus.
Carbuncle,	Anthrax Carbunculus.
Wheal,	Acne.
Scalp or chin wheal,	Sycosis.
Canker,	Lupus, noli me tangere.
White scall,	Vitiligo.
Yaws,	Framboesia, rubula.
Sivveds,	Sibbenia.
<b>PUNCTATE PHLEGMONOUS-TUBERCULAR INFLAMMATION, CHRONIC.—VIII. Cutaneous inflammations, chronic, attended with general affection of the fibro-mucous tissue.</b>	
Arctic leprosy, radesyge,	Lepra Norwegica.
Lombard evil, pellagra,	Pellagra.
Scherlievo, Falcadina,	Lepra Piedemontana.
Asturian itch or scab, Mal di Rosa,	Lepra Asturiensis.
Crim evil, Krimmische krankheit,	Lepra Taurica.
Arabian leprosy,	Elephantiasis.
Soft tubercle.	Molluscum.
Wari,	Verruca.

"a. *Cutaneous inflammations seated in the outer or cuticular surface of the corion, and generally spreading along it.*—Inflammation of the outer surface of the corion may be diffuse and continuous, as in scarlet fever, diffuse and interrupted, as in common rash (*erythema*), nettle-rash and rose-rash, or diffuse and of determinate figure, as in measles. The redness with which superficial cutaneous inflammation is attended varies. Though it disappears on pressure, it returns immediately. In scarlet fever, though its tint is indicated by the name, it often has a shade of brown; in *erythema*, or simple rash, it is rarely so vivid as in other forms of cutaneous inflammation; in rose it has a tinge of yellow. In measles it assumes the shape of crescentic or lunular patches. In simple rash it terminates gradually in the sound skin; but in one variety of this rash (*erythema marginatum*), and in rose it is marked by a distinctly circumscribed edge, or is said to be *marginate*. The swelling of superficial cutaneous inflammation is rather a general distension than obvious elevation. When it is obvious to the eye, or felt by the finger, and is at the same time confined to definite red patches, these are named wheals. A familiar instance of this occurs in the effect produced by the bite of several insects, the blow of a whip, or the stinging of nettles. Spontaneously it is seen in the disease named nettle-rash. In rose, elevation, extensive and continuous, conterminous with the redness, and like it bounded by a distinctly circumscribed edge, is uniformly observed.

"Superficial cutaneous inflammation being seated in the extensive vascular net-work, (*rete vasculorum, reseau vasculaire*), of the corion, always destroys to a greater or less extent its scarf-skin, which comes away in small portions or scales, sometimes in larger pieces, while a new but thinner and more transparent scarf-skin is formed. The process by which these changes are effected is termed desquamation, and is observed in measles, scarlet fever, nettle-rash, rose-rash, common rash, and rose when it does not proceed to the formation of blebs. As the process thus defined forms a good mode of distinguishing its varieties when seated in the outer or cuticular corial surface, I adopt it on the present occasion.

"According to the definition above given, it comprehends the following diseases:—Measles, rash fever, scarlet fever, nettle-rash, rose-rash, common rash.

"b. *Cutaneous inflammations situate chiefly in the outer surface of the corion, producing sero-albuminous fluid, which elevates the scarf-skin into pushes, blebs or blisters, (Bullæ, Phlyctenæ), commencing in certain parts of the corion, but spreading continuously.*

"The outer surface of the corion may be inflamed in such a manner as not to terminate in desquamation or resolution, but to pour forth a

watery yellowish fluid, which detaches the cuticle and elevates it in the form of a bleb or blister. This is very well seen in the instance of scalding by boiling fluids, on the application of the blistering fly (*Meloe vesicatorius*), or even in some cases of friction of parts naturally tender. In each of these cases, in a short time large watery elevations or bladders appear. The same process takes place spontaneously in rose, in common blebs and in the bullose or bleb fever. The form of these blebs is not determinate; nor even are they always uniform in appearance. The action by which they are produced, though more violent in degree, is not different in kind from ordinary cutaneous inflammation. It is attended, nevertheless, with more swelling of the corion, more exquisite burning heat, and more searing or scalding pain, than the other forms of superficial cutaneous inflammation. The fluid secreted by this process is sero-albuminous. When the raised cuticle is divided, a yellowish transparent watery fluid escapes; and when the cuticle is detached so as to expose the inflamed spot, the inflamed skin is found covered by a quantity of soft, cellular, gelatinous matter, of a yellow-white colour, somewhat tough and similar to coagulable lymph. This substance is traversed by firm linear partitions, not uniform in number or direction, but forming interstices from which serous fluid, the same as that which escaped first, is discharged. The coagulable matter, which is albuminous, at the same time contracts, and forming a covering to the corion, while the latter begins to secrete a new cuticle, is at length thrown off in the form of opaque patches. These facts show that the new secretion, though discharged fluid, afterwards separates into a serous and an albuminous portion, and is an imperfect or modified coagulable lymph; that both are the product of the inflammatory process; and that the latter is analogous to that producing albuminous exudation from serous membranes. This analogy has not escaped Bichat, who remarks, that vesications do not occur in the latter, solely because they want epidermis. To this head belongs the inflammation of cutaneous whitlow.

"c. *Cutaneous inflammation commencing in circumscribed or definite points of the outer surface of the corion, and producing minute eminences or pimples (papulæ), which disappear gradually or terminate in scarf, or minute exfoliations of the cuticle.*

"When cutaneous inflammation appears in the form of innumerable minute points, which, without spreading or coalescing, remain in general distinct, it differs in nature from that which has been already considered as the spreading or diffuse inflammation. The simplest form under which this is observed to occur is that which consists of the minute pointed elevations named pimples (*papulæ*), which may be described as small conical eminences, surrounded by a red circle, and sometimes attended with superficial redness of the neighbouring skin, but without definite figure. They are slow in progress, do not proceed to suppuration, and after remaining an uncertain time, subside gradually, occasioning a branny or scurfy exfoliation of the scarf-skin with which they are covered.

"These seem to have been the circumstances which induced Dr. Willan to consider pimples as arising from inflammation of the *papillæ* or conical eminences of the corion. I cannot say that personal observation has enabled me to determine whether this is at all times truly the case or not; and I therefore will not positively deny the accuracy of the opinion. On this point, however, I remark,—that I have seen and daily see instances of *strophulus*, in which the papular eruption can neither in form nor distribution be traced to the cutaneous papillæ; that the eruption of *lichen* in adults appears in situations in which the papillæ are few, as regularly and abundantly as in those in which they are numerous; and that we meet with local examples of papular eruption in which it is difficult to suppose the disease to be an affection of the papillæ of one region of the skin only. For these reasons it may be justly doubted whether in all instances papular eruptions consist in inflammation of the papillæ.

"Of the anatomical characters of pimples, little is accurately known. They are not diseases necessarily fatal; and when death takes place during their presence, their distinctive characters are either much changed, or entirely gone before the anatomist can inspect them. In some instances of *strophulus* in infants cut off by other diseases, I have seen the corion rough and slightly raised in irregular spots, which were the seat of closely-set pimples during life.



"d. *Cutaneous inflammation of the outer surface of the corion, more or less circumscribed, affecting its secreting power, and thus producing first, exfoliation of the scarf-skin, afterwards vitiated scarf-skin.*

"Though the scarf-skin (*cuticula, epidermis*), and nails are incapable of injection, and are therefore believed to be inorganic, the former is remarked to be more sensible when thin and semitransparent, than when thick and opaque, which it may be in certain regions. It is also observed, that when it is removed by a blister, or the effect of a scald, the surface of the corion, when it ceases to discharge the sero-albuminous fluid already noticed, becomes covered by a thin pellicle of transparent membrane, so delicate that it affords very little defence to the subjacent skin. This same transparent pellicle is observed in the skinning or cicatrization, as it is named, of cutaneous wounds. If, under these circumstances, the formation of this pellicle be observed, it will be found that it is deposited from the outer or cuticular surface of the corion, like a secreted substance in a viscid or semifluid state, and afterwards becoming hard, dry and semitransparent.

"When the outer surface of the corion becomes inflamed or otherwise disordered, its secretion is no longer performed with the same perfection or regularity. The effect of this is seen in the vitiated state of the scarf-skin, which is no longer the uniform, continuous, firm, semitransparent membrane observed in health, but becomes broken, thickened, opaque and divided into numerous scales. Of the various modes in which this secretion may be deranged, and of the varieties in cuticular disease to which it may give rise, too little is known to speak with precision of their individual forms. But it may be considered as certain, that every morbid state of the outer surface of the corion gives rise to certain unnatural conditions of the cuticle, and that every anormal state of the cuticle depends originally on a morbid state of the cuticular or secreting surface of the corion. In general, this morbid state consists in some degree of inflammation, or at least it is attended with some degree of this process, though in the chronic form. In some instances, this chronic inflammation is obviously the immediate cause of the derangement of secretion; but in other instances, the disordered secretion continues after the inflammation subsides. The former is observed in the Greek leprosy (*lepra*), and the scaly tetter (*psoriasis*), in both of which the formation of the morbid opaque scales is preceded and attended by a red inflamed state of the corion taking place in minute spots. It is less obvious in dandriff (*pityriasis*), in which the surface of the corion, though dry, harsh and rough, is not particularly red or vascular, and which, therefore, appears to exemplify the latter statement. The fish-skin eruption (*ichthyosis*), is in general so chronic that it is difficult to say whether it is or is not attended with any degree of the inflammatory process; but when its commencement can be traced, it is generally possible to recognize marks of inflammation of the outer surface of the corion.

"e. *Cutaneous inflammation originally affecting the outer surface of the corion, circumscribed, definite or punctuate, producing effusion of fluid, first pellucid, afterwards slightly opaque, with elevation of cuticle, with or without further affection of the corial tissue.*

"Inflammation may be developed in many minute points of the corion simultaneously, and, continuing limited to these points without spreading, may terminate in each in the formation of a pellucid fluid, afterwards becoming more or less opaque. These may either be confined to the outer surface of the corion, without affecting its substance, or, beginning originally at the surface, may thence affect its substance.

"The individual points appear first like a common rash, with general redness of the skin, sometimes like pimples or minute elevations, with a good deal of redness surrounding them. After some hours, a white pearly point appears at their summits, while the surrounding redness diminishes in breadth, so as to form a mere circle or hoop (*areola*), which, if minutely examined, is found to consist of a zone of vessels, circumscribing the inflammatory process, and forming in their centre the fluid which gives the elevation the white appearance. After 12, 20 or 30 hours more, according to circumstances, the white pearly appearance extends, assumes a tint of yellow, and is depressed on the summit, indicating the advancement of the process of circumscribed inflammation. In the course of two

or three days, there is detached a thin crust or scab, which consists of the cuticle of the part with the dried fluid adhering to it. Minute elevations of this description have been termed vesicles (*vesiculae*), and the contained fluid *lymph* by Dr. Willan. The fluid thus distinguished is not the same as the coagulable lymph of J. Hunter. It is nevertheless sero-albuminous, and appears to be quite similar to that which is secreted in the first stage of suppuration. The process by which it is secreted is confined to the vascular surface of the corion, and is not attended by ulceration of that surface in millet-rash, shingles (*herpes*), and the red-fret or mercurial eruption (*eczema*). In chicken-pox it is sometimes attended by ulceration of the corial surface, sometimes not.

"In the other two forms of vesicular inflammation, though the process commences at the surface of the corion, it finally affects the substance of that membrane.

"In the limpet-shell vesicle (*rupia*), inflammation of the punctuate or circumscribed character commences in one or more points of the outer surface of the corion, and causes the secretion of a thin clear fluid, which first elevates the cuticle into a broad flat vesicle, and soon becoming opaque, oozes through the broken cuticle, and is hardened into thin, superficial, but in general, laminated scabs. These vesicles are surrounded by a red, hard and painful margin or base, indicating slow inflammation of the corial tissue.

"The progress of this form of cutaneous inflammation, demonstrates clearly and satisfactorily the gradual transition of the morbid action from the surface to the substance of the corion. The inflammation, confined at first to a small spot by the usual zone or areola, causes merely sero-albuminous secretion, and consequent elevation of the cuticle. If at this time the cuticle be removed accidentally or intentionally, the subjacent surface of the corion is intensely red, soft or velvety and pulpy, elevated and extremely tender, while the surrounding ring or hoop of skin is hard, and equally elevated and red. From the softened inner portion the secretion of sero-albuminous fluid, generally of a reddish tint, continues; and the surface itself begins to become rough, and to lose its velvet aspect. This indicates incipient ulceration, which proceeds to affect the substance of the corion, until it is either much or wholly destroyed, generally in the form of an inverted cone; while the place of the destroyed skin is supplied by the sero-albuminous secretion, which hardens as it is formed, and seems thus to sink deeper and deeper into the skin. In the meanwhile the surrounding portion of the skin is much indurated and inflamed, and seems to form a hard ring in the skin; and the whole process is attended with extreme pain, searing heat, and constitutional distress. These phenomena are most distinctly seen in the *rupia prominens* and *escharotica*, and in a variety of the eruption, which I have witnessed in the persons of those who have been affected with the constitutional symptoms of syphilis, and who have for this been subjected to repeated courses of mercury (*rupia cachectica*).

"Cow-pox (*vaccinia*), whether in the teat of the cow, or the skin of the human subject, consists in local inflammation of the outer surface of the corion, which, by causing the secretion of a thin semitransparent fluid, elevates the cuticle into a vesicle. At the same time, the surrounding skin is red, sore and hard (*areola*); and the inflammatory process denoted by these signs causes suppuration of the corion, with some destruction of its substance, or what is termed ulceration.

"If the thin fluid secreted by the vaccine vesicle either in the teat of the cow, or in the skin of the human subject, be taken before it has become opaque or puriform, and applied to the surface of the human corion exposed by scratching, slight incision, or suitable abrasion of the cuticle, it is followed by local inflammation of the same characters as those of the original sore or vesicle, from which the morbid fluid is taken. The vaccine inflammation is naturally divided into two stages."

"During the progress of the local inflammation, some disorder of the constitution takes place generally about the seventh or eighth day, in the form of loss of appetite or sickness, slight thirst and heat, and dryness of the skin. The pulse is almost never affected. The vaccine vesicle may also produce sundry cutaneous inflammations, very transitory, and of a secondary nature. Of these the vaccine rose-rash (*roseola vaccina*) is the most important and frequent.



"It must not be understood that vaccine fluid, when applied to the human body, ever produces a general eruptive disease like itself over the person. This, indeed, was believed to be the case at first by Jenner, Pearson, Woodville, and perhaps some others. But more correct knowledge of the history of the disease shows that its action is confined to the identical spots to which it is applied; that these, and these only, become the seat of genuine vaccine inflammation; and that whatever eruptions or other morbid changes in the skin succeed, or have been said to succeed, the communication of cow-pock to the human body, are not the result of its genuine or proper action. It is strictly and truly a local morbid process."

"Of *chicken-pox* as a cutaneous inflammation sometimes affecting the corial substance, I have already merely spoken. Like instances of the punctuate inflammation, though it commences at the surface of the corion with sero-albuminous secretion, it very often proceeds to suppuration, and occasionally affects the corial tissue. This is seen in the lenticular and more distinctly in the conoidal chicken-pox, in which the suppurated points are marked by depressions. The cutaneous punctuate inflammation of chicken-pox may be considered as the link which connects the vesicular and the pustular eruptions.

"The facts now adduced show that it is impossible to draw a distinct line between the vesicle and the pustule, as was attempted by Willan and Bateman. Looking only at the pathological process by which they are developed and advance to maturity, it is more natural to consider them as differing in degree only, and as gliding by imperceptible shades into each other, than as always capable of being accurately distinguished. What is a vesicle, when first observed, may assume the appearance of a pustule on the following day; and the thin sero-albuminous fluid, by which they have been supposed to be distinguished, may be converted into purulent matter before the termination of the disease. As the terms, nevertheless, are useful as precise distinctions in nomenclature and description, and as they occasionally may be traced to a pathological difference, I retain them in the present observations.

"*f. Cutaneous inflammation originally affecting the outer surface of the corion, afterwards its substance, and producing purulent matter more or less perfect.*

"Inflammation of the minute circumscribed kind, though commencing originally on the surface, may speedily affect the substance of the corion, and in its progress may produce more or less loss of substance, with formation of purulent matter. The objects thus formed are named *pustules*, and are to be viewed as instances of genuine phlegmonous or rather purulent inflammation of the skin. Practical authors enumerate four forms under which this species of cutaneous inflammation may take place:—1st, the *psyracium*; 2d, the *achor*; 3d, the *favus*; and 4th, the *phlyzacium*. To this number I feel it necessary to add the *phlyctidium*.

"The *psyracium* may be viewed as the connecting link between the vesicle and pustule. It is small, often irregularly circumscribed, producing but slight elevation of the cuticle, and terminating in a laminated scab. It is attended with little or no redness of the surrounding skin (*areola*), does not affect the corion deeply, and rarely almost never leaves a hollow scar. Several of them often appear together, and becoming confluent after discharging the scanty puriform matter which they furnish, pour out a thin watery fluid, which on drying forms an irregular incrustation.

"The *achor* differs not much from the *psyracium*. It appears in the form of a minute pointed elevation, of a yellow-colour, and succeeded by a thin brown or yellowish scab. It contains straw-coloured matter of the appearance and consistence of strained honey; it is surrounded with little inflammatory redness, and seems to affect the corion as little as the *psyracium*. In ordinary circumstances it leaves no scar.

"The *favus* may be esteemed the next degree of inflammation of this tissue. It is larger and flatter than the last-mentioned pustule, not pointed, and contains a more viscid matter than the *achor*. It is surrounded by a slight-red, irregular, marginal ring, indicating a more considerable affection of the corial tissue. It is succeeded by a yellow, semitransparent, and sometimes cellular scab, like honeycomb.

"A form of pustule referable neither to these, nor to that which is to follow, I must here mention,—the *phlyctidium* or genuine small-pox

pustule. It consists in a circular or annular spot of inflammation of the corion, encircled by a red ring or zone, which is observed to consist of the outer corial surface, highly vascular and elevated. Within this suppuration takes place. Though the *phlyctidium* is observed spontaneously in the distinct small-pox, it is also produced artificially by friction of tartar-emetic ointment.

"The *phlyzacium* is the most perfect example of the most violent degree of this form of cutaneous inflammation. It is described as a large pustule, raised on a hard circular base, of a lively red colour, and succeeded by a thick, hard, dark-coloured scab. It is generally slow in progress, and, commencing at once on the surface and in the substance of the corion, is attended with considerable surrounding inflammation; and the suppurative process which follows is always accompanied with more or less destruction of the corial tissue. It often leaves a hollow scar. The surrounding redness, hardness and elevation; the slow progress and sometimes tedious suppuration; and lastly, the loss of corial substance, are the circumstances which indicate the peculiar seat of this form of cutaneous inflammation.

"Into the pathological characters of the individual pustular inflammation the limits of this treatise do not permit me to enter. On one or two of them, however, I shall offer a few remarks which may tend to illustrate the general nature of cutaneous pustular inflammation. I begin with small-pox as one of the most interesting."

"The most doubtful point of this account (*a*) [by Cottugni], of the variolous inflammation, is that which relates to the disease being entirely confined to the mucous body of Malpighi. The existence of this membrane is very doubtful, and if it cannot be demonstrated, the opinion of small-pox being confined to it is obviously inconclusive. If the term *outer surface of the corion* be substituted for mucous body, the whole description may be regarded as not far from the truth. The depressed pit or *navel* of which Cottugni speaks, corresponds with the central slough of John Hunter, to which I shall advert in its proper place. At present, the process of variolous inflammation, if divested of hypothetical language and opinions, may be stated in the following terms:—

"The small-pox eruption consists of circumscribed points of inflammation developed simultaneously in many spots of the corion. These inflamed spots (*phlyctidia*), always commence at the cuticular or outer surface, and in general penetrate to a depth which is greater or less in different circumstances. After no long time, each *phlyctidium* is surrounded with a hard, red circle, somewhat raised, which may be conceived to indicate the process of cutaneous inflammation. Hunter would say, and perhaps did say, that this inflammation is of the adhesive kind, and arises from lymph effused into that part of the corion which is red, hard and swelled. I believe it cannot be in every instance shown that this hard swelling depends on effusion of lymph; and it may be doubted whether it arises from such effusion in the case of small-pox. *First*, hardness and swelling take place at a period of the eruption so early, that it appears unreasonable to ascribe them to effused lymph. *Secondly*, hardness and swelling accompany every example of circumscribed or definite inflammation. *Thirdly*, it is not easy to understand in what particular part the lymph could be effused, for the corion does not contain cells or cavities like the filamentous tissue, but the outer surface consists of a smooth dense membrane, abounding in minute blood-vessels. *Fourthly*, it is as easy and more natural to think that if effusion took place, it would do so into these minute vessels. In point of fact, the capillaries of the corion of the pustular redness and hardness are numerous and distended; and we believe that the truest conclusion is, that the redness, hardness and swelling of each pock, consist in the unusual distension of the corial capillaries with blood.

"Pustular inflammation of the skin naturally terminates in suppuration, which may be either with or without destruction of the corial tissue. In the variolous *phlyctidia*, when distinct, destruction of the skin is rare, but may occur. There is reason to infer that it takes place in consequence of a true process of ulceration."

"From these facts and observations, [after Hunter, Adams and

(a) It is not deemed necessary to repeat here the description by this author, as given by Dr. Craigie.



Cruikshank,] as well as those which it has occurred to myself to make, the following conclusions may be drawn:—

"The *phlyctidium* or pustule of small-pox consists of a cutaneous inflammation, which may produce,

"1st. Secretion of puriform fluid without permanent injury or destruction of the corion. In lenticular chicken-pox, and distinct small-pox, there is no doubt that though suppuration takes place from the cuticular surface of the corion, it is not necessarily connected with destruction or ulceration of that membrane.

"2d. Suppurative ulceration of the corion. In conoidal chicken-pox, in some instances of distinct small-pox, and in many instances of small-pox partially or wholly confluent, each pock goes on to ulceration of the corion. It does not appear that the pock slough described by Hunter is present in every case. It is admitted by Adams to be wanting in the vesicular small-pox, which appears after cow-pox, and in some other occasions.

"3d. Death of numerous spots of the corion constituting sloughs. In some cases of distinct small-pox this has been observed; but it is most frequent in the confluent eruption. It then appears in the form of a white circular patch lying at the bottom of each pock.

"4th. Along with sloughs at individual points, an extensive spreading redness of the skin rapidly terminating in sloughs of irregular shape and limits not unfrequently occurs in certain bad forms of variolous eruption."

"Of the diseases termed *malignant pustule*, by the French and other foreign authors, (*Anthraxion*; Nar al-Parsi; *Persian fire*), we can scarcely speak from experience in this country, in which, so far as I am aware, the disease is unknown. From the description given by Enaux and Chaussier, Vicq-d'Azyr, Pinel, Ozanam and others, it appears to consist in inflammation of the outer surface of the corion, speedily depriving that membrane of its vitality. It may commence in one or two modes; *first*, as a hard, red, burning, not elevated point, speedily causing bluish or reddish-blue fluid secretion, elevating the cuticle into a purple or pale blue blister (*phlyctæna*); *second*, as a hard knotty substance slightly elevated into a doughy swelling, and causing detachment of the cuticle by similar effusion. In both cases the affected corion undergoes mortification partial or general, and is then detached as a foreign body. In some respects this resembles the ordinary carbuncle of this country. But it differs particularly in this, that the malignant pustule (*anthracion*), is ascribed by the best authorities to contagion, and very often is traced to epizootic contagion, or pestilence occurring among the lower animals.

"The great pock (*ecthyma*) consists in an eruption of red, hard, sore pustules (*phlyzacia*), distinct, seldom numerous, without primary fever, and not contagious. In the three species of ordinary (*E. vulgare*), infantile (*E. infantum*), and dingy pock (*E. luridum*), the pustules are round or oval hard masses fixed in the substance of the skin, which is red, hard and swelled, and terminating first in elevation and desquamation of the cuticle, and then in imperfect softening, discharging a serous and generally blood-coloured fluid, which concretes into a foul dark-brown or reddish scab, which at length drops off, leaving the subjacent skin reddish, and marked by a depressed scar, indicating the affection of the corial substance.

"g. *Cutaneous inflammations originating in the substance of the corion, sometimes at the bulbs of the hair, terminating in partial or imperfect suppuration, with formations of scales, crusts, and occasionally sloughs, and more or less destruction of the corial tissue.*

"The pathological reader may perceive that the last disease which came under consideration forms a preparatory step to those of the present order. The hard phlyzacious pustules, by which it is distinguished, denote a more complete affection of the corial substance than is known to take place in any previous cutaneous inflammation; while the slow, crude and imperfect solution which they undergo, and the discharge of blood-coloured rather than purulent fluid, indicates a variety of the inflammatory process different from those already examined, and approaching to those now to follow. The transition, therefore, if not insensible, is at least natural, to a tribe of diseases of which the general character is inflammation of the corion, which, modified in various ways, gives rise to the varieties of disease referred to this kind. The principal modifying circumstances may be referred either to duration, to circumscription, or to difference in kind.

"1. The influence of duration is observed in the comparative difference of progress of the common boil, which is rapid, and that of the whelk (*acne*), canker (*lupus*), and yaws (*frambæsia*), which are slow and tedious. 2. The influence of circumscription or diffusions is evinced in those inflammations which are confined to a spot, and those which spread to some extent. In the whelk and boil the inflammatory process is restricted to a point; in carbuncle, on the other hand, it affects a great extent of the corion through its entire thickness. 3. Whether the inflammation of the corial substance be different in one disease from what it is in another, there are few means of ascertaining. Though various facts seem to indicate something of this nature, too little is known to justify positive conclusions.

"The boil or bile (*Die Beule*; *Furunculus*; *le Clou*; *il Ciccione*): may be adduced as an instance of acute inflammation of the corion confined to a certain spot. Pearson admits that its seat is the skin; but, by afterwards saying that it may occur in any part which abounds in cellular membrane, leaves the alternative either that skin contains this substance abundantly, or that boils may occur in many other tissues. Boyer, by placing its seat in the cellular tissue, confounds it with phlegmon. The opinion of Bichat differs from either, but partakes of both. This anatomist represents the corion to be penetrated by a great quantity of cellular tissue, which fills its *areola*, and is the exclusive and proper seat of the boil. The truth of this opinion depends on the idea attached to the term *cellular tissue*. If by this be meant the loose fatty matter with its intersecting threads, on which the inner surface of the corion rests, the opinion is erroneous; for this is the proper subcutaneous cellular tissue. To this doubtless the inflammatory action of boil may descend; but the phenomena and termination of the disease show that it consists at first of circumscribed inflammation of the corial substance, soon but slightly affecting the subjacent cellular tissue. The circumstances which indicate the corion as the seat of furuncular inflammation, are,—the defined knotty tumour with which the complaint begins, the minute pustule to which it gives rise, and the imperfect and tardy suppuration with formation of sloughs, and the perforated appearance of the skin.

"Of the same nature are the inflammatory tumours termed epinycitis and terminthus mentioned by all authors almost from Celsus to Wiseman.

"Though in this place I notice carbuncle as an example of spreading inflammation of the substance of the corion, yet the question of its precise seat is not free from ambiguity. Hunter believed it to begin in the skin, and going deeper to affect principally the cellular membrane, of which it caused mortification; and with this Pearson agrees. Boyer places it in the teguments and subcutaneous cellular tissue; while Monteggia, who repeats the fact that it destroys a considerable portion of the teguments and cellular substance down to the muscles, seems to regard it as a peculiar action affecting several tissues simultaneously and successively."

"Upon the whole, it may be concluded that the corion is the primary seat of disease in carbuncle, and that the affection of the cellular membrane, with which it is uniformly accompanied, is the effect of spreading inflammation of the corial tissue.

"The whelk (*acne*; *ionthos*; *varus*, *vari*, Celsus) consists of minute portions of corion, round, oval, or spheroidal, hard, circumscribed and elevated. Of the four sorts enumerated by Bateman, three only, the simple (*A. simplex*), the inveterate (*A. indurata*) and the crimson (*A. rosacea*), can be considered as examples of inflammation of the substance of the corion. The black whelk (*Acne punctata*), doubtless arises from disease and obstruction of the mucous follicles, or sebaceous glands. Both the simple and indurated whelk may produce ulcerative destruction of the true skin, and leave a smooth depressed scar; and I have seen them, by extending to the roots of the hairs, render the skin entirely depilous.

"The crimson whelk (*A. rosacea*, *gutta rosea*; dartre pustuleuse couperose of Alibert), is an affection rather complicated; and I doubt whether it is justly classed with those now mentioned. It is doubtless an affection of the corial substance; but it commences with redness and slight diffuse swelling of the skin of the nose and cheeks, not unlike that of *erythema marginatum*. This is followed by the appearance of two or three small seedy particles, very hard, but red and tending to suppurate, which they at length do partially at their



summits, while the base remains hard, red and firm. As the red appearance of the skin spreads the roughness increases, fresh particles of the same seedy consistence arise and undergo the same course; and some coalescing, form broad tubercular blotches of a crimson or livid colour, and irregular notched surface. The skin is not, however, in this state at all times permanently red. I have seen this affection in patches on the cheeks and nose so light coloured, that in the morning it could not be recognized; but in the latter part of the day, after taking wine, and becoming warm, they assumed an intense red inclining to crimson. In the advanced stage, when numerous tubercles appear, and the surface is generally rough and red, the skin swells diffusely and becomes doughy, and is traversed by tortuous purple veins, the nose is enlarged, the nostrils become distended, their surface notched into lobular masses, the red hard bodies of the cheeks become large and coherent, and the whole countenance is converted into a crimson tumid mass, in which the original features are prodigiously deformed. These wheals do not often undergo suppuration, but are constantly casting the cuticle in the form of peelings, or scales, or crusts. When suppuration occurs it is liable to terminate in bad and intractable sores.

"The chin and scalp wheal (*sycosis, mentagra, dartre pustuleuse mentagré*), consists in chronic pustular inflammation of the substance of the corion at the bulbs or conduits of the hairs. (Celsi, lib. vi. 3.)

"Under the head of canker (*lupus, noli me tangere*, wolf of Wiseman and others, *dartre rougeante*, Pinel and Alibert), may be noticed a disease consisting in hard elevated tubercles set in the corion, from which they appear to grow. The name of *noli me tangere* is applied by Wiseman to a 'small round acuminated tubercle,' without much pain, unless when 'touched, rubbed, or otherwise exasperated by topics.' Though most frequent on the face, it may occur on other parts. One of these, of a bluish colour, and looking like a vein, appears from the description to have been of the nature of erectile tissue.

"One example of bluish spherical tubercle I have seen in the person of a woman of about 65 years of age, otherwise healthy. It was situated on the side of the nose near the middle of the nasal bone. It appeared first in the form of a small red prominence less than a pea, but gradually shot up from the skin, so as, in the course of twenty months or two years from its commencement, to project at least one-third of an inch from the surrounding skin. It was then round or spherical, smooth, and even shining, and of a blue or light purple colour, which, on close examination, was derived from numerous minute vessels. It was connected to the skin by a neck, the base being narrower than the summit, but did not adhere to the bone. What was the ultimate fate of this person I did not learn; but no doubt can be entertained that if life were continued a sufficient time, the tubercle would terminate in destructive fungating ulceration.

"I have seen also many cases of ragged ulceration of the countenance, and one or two in the incipient state before it spread to any extent. One mode in which this disease appears to commence is by the formation of a patch of hard, red skin, slightly but diffusely swelled, and which is the seat of a hot, gnawing, smarting sensation. Though smooth on the surface, it is found by examination to be irregular, or very soon becomes so by the formation of small, hard, round bodies (pustulo-tubercular), which after some time begin to be acuminated, and cast the cuticle in thin peelings. Occasionally they give rise to thin watery vesicles of no determinate shape, which either burst their cuticle and discharge their fluid, or appear to cause an insensible dewy oozing all over the surface. The most usual seat of this form of cutaneous inflammation is the side of the nose, one of the *alea*, or a small portion of the cheek. After subsisting in this form for some time, it may disappear spontaneously, the skin becoming of its natural colour, soft and without pain. More frequently, however, the cuticle continues to be cast off in peelings, vesicles and pustules continue to be formed, and one or other more red and painful than the rest is at length covered by a scab, which, dropping off, discloses a small sore with a smooth ungranulating surface, and a scanty, thin, bloody-coloured, puriform discharge, which generally forms a fresh crust or scab. This either spreads without showing any disposition to heal, or coalesces more or less completely with other sores which are generated in the same mode, and undergo the same process. After proceeding in this manner for weeks or months,

a tendency to heal is manifested in some parts, while others continue to spread. The parts which heal are irregularly scamed and scarred. This form of disease appears to correspond with what Wiseman describes under the name of *herpes exedens*.

"Another form of pustulo-tubercular disease I have seen take place on the skin of the face, generally on the forehead, in the form of round hardish bodies, with flat summits, to the number of eight, ten or twelve, disposed in a circular arrangement. The surface of the skin was red, glossy and occasionally casting cuticular scales and shreds. These bodies were stated to be the seat of an uneasy sensation of heat rather than of pain. They had not advanced to ulceration. Upon removal by the knife, they became pale, white, and shrunk considerably. Internally they consisted of gray-coloured substance, interspersed with a few blood-vessels, not hard, so much as doughy, tough and fibro-cartilaginous. They did not, nevertheless, present the characters of carcinoma, but seemed to consist in an inflammatory induration of the corial tissue.

"On the anatomical characters of the white scall (*vittiligo*), I possess no accurate information. I have often suspected that the appearance referred to this disease are in truth the effects of others more known.

"Yaws (*frambesia*) consist in chronic inflammation of the corion taking place in circumscribed spots, attended partly with death of a portion of the corial substance, partly with growth of granular fungi,—the result of a peculiar morbid poison."

"Not only are yaws an inflammatory disease of the skin, but they are not, strictly speaking, an example of tubercular disease of that membrane, as in the arrangement of Willan is erroneously represented. The phenomena show that they consist in an inflammatory process of the corion commencing in minute points, and gradually spreading in extent and penetrating in depth, till it generates a peculiar morbid product, which, after undergoing certain changes, is at length spontaneously removed, and allows the sore to heal. Thomson justly remarks, that the disease is at first papular, then pustular, and afterwards consists of yaw, though the latter is not constant, as the ulcer may heal without this substance; when it must be accounted pustular. At no period does it appear to be tubercular; for the yawey growth, to which alone this term can be applied, is rather an effect of the pustular or chronic corial inflammation modified by the proper yawey action. It may, in short, be inferred, that when the yawey action is sufficient without being excessive, it generates the proper fungous growths, under which the corion is either not materially injured or is regenerated; if the action be too violent, this growth is either destroyed or prevented from appearing; and in either case the corion is irreparably injured.

"*Sivvens*, though a disease affecting not only the skin, but the fibro-mucous membrane, is entitled to notice in this place, as causing cutaneous inflammation not dissimilar to that of yaws. Like most inflammations depending on the action of a morbid poison, when it affects the constitution, it induces inflammation of the corion in the shape of pustules terminating in bad ulceration and sloughs,—of furuncular tubercles and ulcers,—and of pustular sores affording the raspberry granulating fungus.<sup>1</sup>

"*h. Cutaneous inflammations, chronic, affecting at once the surface and the substance of the corion, and attended with general affection of the fibro-mucous tissues.*

"Of the disorders which I refer to this head, several are so similar, that they are probably to be viewed as varieties of the same morbid action. Of this kind are the Radesyge, Spedalsked, Liktraa or northern leprosy, the Pellagra or Lombard evil, the Scherlievo of the same place in Italy, the Mal di Rosa of Asturia, and a cutaneous disorder prevalent in Crim Tartary. In whatever points these disorders differ, all of them agree in being preceded by distinct febrile commotion, in consisting of inflammation affecting the corion in definite points, and in causing at the same time more or less inflammation, punctuate or diffuse, of the mucous and fibro-mucous membranes of the nasal cavities, the throat, the Eustachian tube, and tympanal cavity.

<sup>1</sup> Gilchrist in Essays and Observations, Phys. and Lit., vol. iii. art. xi. Ed., 1771. Diss. Inaug. de Syphilide Insontium, &c. Auct. A. Freer. Ed., 1776. Cases in Surgery, &c. By James Hill, Surgeon. Ed., 1772. Observations on Morbid Poisons, &c. By Joseph Adams, M. D. London, 1807, chap. xv. 2d ed.



"In these diseases, the affection of the corion is neither pustular nor tubercular, but consists in inflammation of its substance occurring in many minute points, and causing first an appearance like papulæ, or sometimes only an extensive diffuse redness and roughness of the skin; then desquamation of the cuticle; then pustulo-tubercular or minute hard eminences seldom suppurating completely, but sometimes causing, partly by sloughing, partly by ulceration of the corion, deep foul sores, destroying the corial texture and the bulbs of the hair. This is particularly the case in the Radesyge, the form of disorder prevalent in Iceland, the Scandinavian peninsula, the Feroe Islands, and the peninsula of Jutland. In those prevalent in Italy, Austria and Crim Tartary, ulceration of the corion appears to be less frequent.

"The limits of this treatise do not permit me to enter at large into the history of these diseases, which, perhaps, are not to be viewed as merely cutaneous affections; and I shall simply refer to the best sources for further information.<sup>1</sup>

"To this head also may be referred some of the cutaneous eruptions which occur either among the secondary symptoms of syphilis, or in the persons of those who, for this disease, have been subjected to one or more courses of mercurial medicines. Though these eruptions may appear sometimes in the form of *papulae*, sometimes as a variety of *rupia*, and sometimes as *ecthyma*, they are also not unfrequently of the chronic pustulo-tubercular nature, originally taking place in the corion, and causing more or less ulceration of that membrane. Their connection with inflammation of the mucous and fibromucous membranes is well known.

"Upon elephantiasis so much accurate information has been of late years collected by Dr. Adams, Mr. Lawrence and Dr. Lee, that little difficulty can be experienced in settling its character as a morbid state of the skin. The case described so well by the last of these observers, I had repeated opportunities of seeing; and the appearance of the skin could leave no doubt of the disease affecting the substance of the corion. The exact nature of this affection is perhaps less easily determined. By calling it a tubercular eruption, after the manner of Dr. Bateman, little exact information is communicated. Bichat states, that he has seen the corion manifestly disorganized in elephantiasis,<sup>2</sup> but says nothing of the anatomical characters of this disorganization. Pinel, Beclard and Meckel are equally silent on this subject. In short, though we have good descriptions of the external visible appearances of Arabian leprosy, an accurate description of its anatomical characters is still a desideratum.

"The chronic soft tubercle (*molluscum diuturnum*), is a rare disease; and I have seen only one example of it in the person of a man of 40, in whom these bodies were disseminated over the cutaneous surface of the face and scalp, the trunk, the upper extremities, the nates and thighs. Of two of the larger tumours which were removed from the *palpebræ*, the greater part was composed of firm, tough, whitish-gray matter, of the consistence of condensed cellular texture, penetrated through its whole extent by numerous minute blood-vessels, but exhibiting in no other respect traces of organization. This substance, when macerated in water, was resolved into gelatinous, flocculent filaments, easily lacerable, and presenting no definite structure. Imbedded in this, and removable most easily by maceration, were several small bodies not larger than a pin head, like fat in appearance, of a regularly spheroidal shape, of a lemon-yellow colour, and specifically lighter than water. The matter of these bodies was unctuous. It communicated an oily stain to paper; it liquefied and became transparent at a temperature not exceeding 97° Fahrenheit, so that when attached to the body, it must have been

fluid; it was insoluble in alcohol, ether and water, but formed in the volatile oil of turpentine a colourless solution. When this was exposed to the temperature of the spirit-lamp, the greatest part of the volatile oil was evaporated, leaving a transparent, colourless, but viscid and semifluid substance, communicating to paper a stain becoming less deep, but not wholly removable by exposure to a high temperature. These results favour the idea that the matter of these bodies is oleaginous: but I was unable to observe any action of *aqua potassæ* or *aqua ammoniæ*, after repeated trials, both at the ordinary temperature of the atmosphere and when liquefied by a gentle heat. By the sulphuric acid it is hardened and blackened; by the nitric acid its yellow colour is rendered more intense.<sup>3</sup>

"Whether the presence of these yellow adipocirous bodies is uniform in the *molluscum* I have had no subsequent means of ascertaining. If they are, it may be reasonably conjectured that their formation depends on some morbid or vitiated state of the sebaceous follicles.

"Wart and corn are believed to depend on morbid accumulation of cuticle. The former, however, is vascular at its basis; and it may therefore be inferred that its production depends on morbid action of the surface of the corion at the particular point at which it appears.

"2. *Dermatæmia Dermatorrhagia*.—Hemorrhage of the skin appears under two forms; either that of a bloody or blood-coloured fluid oozing from certain regions, or of blood effused in the form of purple specks, spots, patches, or livid stripes on the surface of the corion below the scarf-skin. The former discharge is rare, and takes place chiefly as a supplementary evacuation to some natural one accidentally suppressed, as the menstrual discharge in females. The latter is of a different nature, and is both the effect and proof of a morbid state of the system.

"Restricted in this manner, hemorrhage from the corion may take place in two modes; either when the corion only is affected, or when it is affected in common with many other membranes. The first case constitutes the simple purple disease (*purpura simplex*) of authors; of the second we have examples in the hemorrhagic purples (*purpura hemorrhagica*) or land-scurvy, and in the genuine sea-scurvy (*scorbutus*.)

"The anatomical characters of the disease consist in bright red or crimson spots, becoming in a day or two purple or livid, afterwards brown, and when about to disappear, assuming a yellow tint. They are occasionally attended with long livid stripes (*vibices*) or patches (*ecthymomata*), and in some instances, the cuticle is raised into vesicles or large purple blebs (*phlyctenæ*), containing bloody or purple serous fluid. These spots consist of blood or bloody fluid, effused on the outer surface of the corion, which is soft or pulpy, velvety, and reddish, from injection of its vessels.

"3. *Angiectasis*.—Anastomotic aneurism is frequent in the corion, and has been observed by J. Bell, Freer, Travers and Wardrop. Though congenital, it must not be confounded with the *navus maternus* or birth-spot (*Penvie*), which appears to consist in a peculiar original malformation of the corion. A similar congenital defect is the white-spot (*leucosis, leucathiopia*), which consists in the absence of the polished vascular surface of the corion. Occasionally it takes place during life, and in minute spots is observed to follow diseases in which the cuticular surface of the corion has been destroyed by ulceration.

"4. *Meliceris*, Cutaneous Wen. The only encysted tumour which takes place in the skin consists in the immoderate enlargement of one or more of its mucous follicles, in consequence of obstruction of the excretory duct. When from any cause this takes place, the sebaceous matter, which in the healthy state is propelled to the surface and removed, accumulates in the interior of the follicle, which is thus inordinately distended, till, by removing the obstruction, the orifice is opened and the inspissated matter eliminated. It almost invariably again accumulates unless care be taken to keep the excretory duct pervious,—an object which is most easily and certainly attained by frequent ablation. This mode of explaining the origin of the cutaneous folliculated tumour was understood by Morgagni,<sup>4</sup> Haller,

<sup>1</sup> For Radesyge, Dissert. Inaug. de morbo cutaneo lue venereæ consecutivum simulante, auctore C. F. Ahlander, Upsaliæ, 1806. Diss. Inaug. sistens Obs. in exanthema arct. vulgo Radesyge, auctore Isaaco Vought. Gryphæ, 1811. Geographische Nosologie von Fried. Schnurrer, M. D., p. 440. Morbus quem Radesyge vocant, &c. Commentatio Auctore Fred. Holst, M. D. Christianiæ, 1817. Ueber die Aussartige Krankheit Holsteins, &c. Von Ludwig Aug. Struve, M. D. 1820.—For Pellagra, S. Const. Tili crat. de Pellagræ Pathologia. Viteberg, 1791. De Pellagra Obs. quas collegit Caiet. Strambio, 1784–89, Mediol. Franc. Frapollii Mediol. Animadvers. in Morbum vulgo Pellagra, Med. 1771. N. X. Jansen de Pellagra, Lug. 1787. Frank Delect, tom. ix. p. 325. Holland in Medico-Chirurgical Transactions, vol. vii. —For Mal de Rosa, Thierry Observations de Physique et Medecine, tom. ii. chap. vi. —For Scherlievo, Annali Universali de Medecina.—For Crim Tartary disease, the travels of Falk, Gueldestadt, and Pallas.

<sup>2</sup> Anat. Générale, tom. iv. p. 688.

<sup>3</sup> A good painting of the subject of this case was made by my late friend Staff-Surgeon Schetky, and by him deposited in the pathological collection of Chatham Hospital.

<sup>4</sup> Adversaria Anatomica.



Plenck,<sup>1</sup> and Monteggia,<sup>2</sup> and has been recently revived by Sir Astley Cooper.<sup>3</sup>

"*Scirrhus-carcinoma* of the skin is not uncommon. Though it may occur in any part of the cutaneous covering, it commences most frequently in situations where the corion is delicate and thinly covered. The skin of the face, especially of the eyelids, prolabium and nose, is a frequent seat of this disorder; and next to these, perhaps, are to be placed the nipple of the female and the penis of the male, the corion of which is liable to be affected by this morbid structure. The scrotum is very often the seat of that peculiar carcinomatous destruction occurring in the persons of chimney sweepers. In all these cases the structure is much the same. In the situation of the corion is seen a tough firm substance of fibro-cartilaginous structure, the fibrous bands being generally arranged in a waving direction. In the most distinct example of the disease which I examined personally—a case of scirrhus-carcinomatous degeneration of the whole skin of the penis—these fibrous bands were disposed transversely to the long direction of the part, and appeared to consist of a fibro-cartilaginous long band folded repeatedly on itself.

"The reparation of the corion when destroyed has been maintained by many authors. Notwithstanding their assertions, however, this membrane is never, after its substance has been injured, restored to its original state. The breach is filled up by firm cellular tissue, the upper surface of which never acquires the organization of the outer surface of the corion. It is nevertheless capable of furnishing cuticle by which this new corion is covered. These facts may be verified in the cicatrization of burns and other injuries in which the corion has been destroyed.<sup>4</sup>

"The *nails*, like the cuticle, may be diseased in consequence of a morbid state of the corial surface and vessels by which they are nourished. In one or two instances of strumous children I have seen them fissured into several longitudinal portions, much thickened and indurated like horn, and incurvated. In others of the fingers of the same individuals, they were small and imperfectly developed; and in some their place was supplied by a small portion of thick horny cuticle. Similar changes are sometimes induced by disease or by injury.

"Of the *hairs* the most extraordinary morbid state is the Polish plait (*plica Polonica*); so named from being endemial in Poland, Lithuania, Hungary and Transylvania, from the source of the Vistula to the Carpathian mountains. It occurs also in Prussia, Russia, Switzerland, and in some parts of the Low Countries. It is impossible to doubt that this anormal condition of the hairs depends on disease taking place in their bulbs or nutritious sacs. This is proved by the state of the skin from which the diseased hair grows, and by the unctuous, viscid and blood-coloured fluid which the hairs in this state contain. We nevertheless possess no very precise information on the nature of this diseased state of the capillary bulbs; and in the absence of exact facts I abstain from offering conjectures.

"The piliparous sacs lose their energy under certain morbid states of the system; for instance, fever, pulmonary consumption, and the constitutional symptoms of lues. The hairs then drop out; and if at this time the bulbs be examined, the sacs are found to contain, according to Bichat, at least in persons who have passed through fever, the rudiment of new hairs. The shedding of the hairs, which takes place in the decline of life, and the period of which varies remarkably in different individuals, Bichat represents as depending on a total death of the piliparous sacs.

"Accidental and anormal development of hairs is not uncommon. In the skin this appears in the shape of hairy moles and similar congenital marks.<sup>5</sup> Their occurrence in the stomach, intestines and bladder, as noticed by a variety of authors, is also to be regarded as

anormal. Lastly, the accidental development of hairs is observed in encysted tumours, especially those of the ovaries, in which masses or balls of hair mixed with fat, oleaginous, or adipocirous matter, are not unfrequently found.<sup>6</sup> On the mode in which these hairs are formed nothing satisfactory is known.<sup>77</sup>

The last system of classification is that adopted by Mr. Erasmus Wilson, in his work already referred to. He calls it the *Natural System*, resting upon Anatomy and Physiology. "The dermis and its dependencies, its glands, and its follicles, are the undoubted seat of all the changes which characterize Cutaneous Pathology."

The following is Mr. Wilson's classification arranged in a tabular form.

"I. DISEASES OF THE DERMIS.		
Inflammation . . . . .	Congestive	{ Specific . . . { Rubicula. Scarlatina. Variola. Varicella. Vaccina.
		{ Non-specific . . { Erysipelas. Urticaria. Roseola. Erythema.
	Effusive . . . . .	{ Asthenic . . . { Pemphigus. Rupia.
		{ Silenic . . . { Herpes. Eczema. Sudamina.
	Suppurative . . . . .	{ Impetigo. Ecthyma.
	Depositive . . . . .	{ Strophulus. Lichen. Prurigo.
	Squamous . . . . .	{ Lepra. Psoriasis. Pityriasis.
	From Parasitic Animalcules . . . . .	{ Scabies.
Hypertrophy of the Papillæ . . . . .	{ Ichthyosis. Tylosis. Clavus. Verruca. Carnua.	
Disorders of the Vascular Tissue . . . . .	{ Vascular Nævi. Purpura.	
Disordered Sensibility . . . . .	{ Hyperesthesia. Pruritus.	
Disordered Chromato- genous Function . . . . .	Augmentation of pigment . . . . .	{ Nigritics. Pigmentary Nævi.
	Diminution of pigment . . . . .	{ Albinismus. Vitiligo.
	Alteration of pigment . . . . .	{ Ephelis. Lentigo. Chloasma. Melasma.
	Chemical Coloration . . . . .	{ Oxyde of Silver Stain.
II. DISEASES OF THE SUDORIPAROUS GLANDS.		
Augmentation of Secretion . . . . .	Sudatoria.	
Diminution of Secretion . . . . .	Abnormal Odour, Colour, &c.	
Alteration of Secretion . . . . .		
III. DISEASES OF THE SEBACEOUS GLANDS.		
Augmentation of Secretion . . . . .	Stearrhæa.	
Diminution of Secretion . . . . .		
Alteration of Secretion . . . . .		
Retention of Secretion . . . . .	{ Duct Open . . . . .	{ Ichthyosis Sebacea. Comedones. Sebaceous Accumulations. Small Sebaceous Tumours, (Molluscum Contagiosum.)
		{ Duct Closed . . . . . { Sebaceous Miliary Tubercles. Calcareous Miliary Tubercles. Serous Cysts. Encysted Tumours.
Inflammation of Glands and adjacent Textures . . . . .	{ Acne. Syccosis.	
IV. DISEASES OF THE HAIRS AND HAIR-FOLLICLES.		
Augmented Formation . . . . .	Pilous Nævi.	
Diminished Formation . . . . .	Alopecia.	
Alteration of Colour . . . . .	Canities.	
Disease of the Hair-Pulps . . . . .	Plica Polonica.	
Disease of the Follicles . . . . .	{ Inflammatio Folliculorum. Favus.	
Abnormal Direction . . . . .	{ Trichiasis. Felling. <sup>77</sup>	

It will be seen, from the preceding systems, that the views of dermatologists tend to an arrangement of diseases of the skin, based upon an anatomical and physiological basis, which, although as yet confessedly imperfect, is preferable to any arrangement deduced from the more external features or physiognomy of the cutaneous eruption and other disfiguration, as adopted by Plenck, Willan and Bateman,

<sup>6</sup> Bichat, tom. iv. p. 828.

<sup>7</sup> Meckel. Journ. Compl., t. iv. and Bicheteau, Journ. Compl., t. xv.

<sup>1</sup> "Sedes meliceridis," says Plenck, "in glandula subcutanea esse videtur. Quicquid ergo porum excretorium glandulæ subcutanæ obdurat, contentum succum inspissat, vel ejus absorptionem impedit, meliceridem producere valet." *Systema Tumorum*, cl. vii. p. 153. Vienna, 1767.

<sup>2</sup> *Introduzione Chirurgiche*, vol. ii.

<sup>3</sup> *Surgical Essays*, Part 2.

<sup>4</sup> *Ottonis Huhn Commentatio de Regeneratione*, &c., 1787, p. 23, &c. *Andrew J. G. Murray, Commentatio de Redintegratione*, 1787, p. 50. A Dissertation on the Process of Nature in the filling up of cavities, &c. By James Moore, Member, &c. London, 1789. Sect. ii. p. 54, &c.

<sup>5</sup> *Haller. Elementa Phys.*



and, with more qualification, by M. Rayer himself. Plumbe, while he admits the value of the anatomy and physiology of the skin as a guide, lays stress on the etiology of the diseases of this tegument, in connection, especially, with constitutional conditions of the system, which originate or modify them. Even if we should fail to establish a successful classification from these premises, it is all important that we should continually bear them in mind, in proceeding to the treatment of cutaneous diseases; for in this way alone shall we be saved from the empiricism which, up to the present day, is still prevalent when this subject is brought up. Plumbe's criticism, as conveyed in the following words, is too well founded:—"A classification of the external and ever-changing forms of the accumulated secretion of disease on the surface—one day a pimple, the next a vesicle, on the third a scab or crust, the fourth a falling scale, the fifth a red spot! This might have served the purpose at the time, for want of a better; but to pronounce it a better classification than one founded, whether with solid foundation or not, by its originators, on etiology, or the causes, external and internal, of the cutaneous disease, would be manifestly absurd." And again:—"Purpura or scurvy stands foremost among these. Its different states, in different and not unfrequently in the same person, may, at uncertain periods, be found putting on the mask of pimple, vesicle, pustule, scab, or scale; blue flat discolorations; large vesicles, half filled with bloody serum, and others, smaller in dimensions, of a yellow, transparent colour. Again, it may show itself in the form of what is commonly called thrush, either in the infant or adult. It may appear in the form of *erythema nodorum*, which is a scorbutic inflammation of the integuments, ending in a partial effusion of serum and blood into the cellular structure. *Erythema andrupia* are the pustular forms of it, ending in scabs." [P. 44, op. cit. Am. Ed.] But, whatever differences may exist between the modified artificial arrangement of M. Rayer, and the alleged natural one of Mr. Wilson, or between them and the mixed one of Mr. Plumbe, there is among these writers a general agreement respecting the organic condition of the skin, in most of the forms of eruption which we commonly speak of as constituting its diseases. Inflammation is the primary and chief pathological change, that on which the phenomena that more immediately strike the eye depend. According to the division of the cutaneous system affected, and in degree to the duration of the affection, will be the physiognomy of skin diseases. M. Rayer, in his table, (p. 21,) includes the larger number of diseases of the skin, under the head of "inflammatory affections distributed according to the number and form of their elementary lesions;" and of these, the larger number, or nine classes, have only a single elementary form. "Peculiar states of the skin, not referable to inflammation, are comparatively few." He enumerates some, again, as "morbid states of the secreting function," and, under another head, introduces "neuroses of the skin." His fifth chapter is "faulty structure or unusual states of one or other of the elements of the skin;" and the sixth is "degenerations." In a second division, he places "alterations of the dependencies of the skin," such as diseases of the sebaceous and piliferous follicles.

Recurring to the original proposition, we find a vast majority of cutaneous diseases, viz., *exanthemata*, *bullæ*, *vesiculæ*, *pustulæ*, *furunculi*, *gangrenæ*, *papulæ*, *squamæ* and *tubercula*, recognized as depending on inflammation of a single elementary form, and *syphilis*, *ambustio* and *pernio*, having several elementary forms inflamed.

Mr. Wilson, also, while he refers the larger number of cutaneous diseases to the dermis, regards the organic changes constituting them as depending on inflammation, in its several varieties of *congestive*, *effusive*, *suppurative*, *depurative*, *squamous*, or from *parasitic animalcules*.

Mr. Plumbe, although he does not lay down thus broadly inflammation as the sole pathological basis of diseases of the skin, is hardly less explicit, when introducing their several divisions to his readers; as when he speaks of some of these diseases being marked by chronic inflammation of the vessels secreting the cuticle, others characterized by active inflammation, with or without constitutional debility or derangement of any kind.

The general division of diseases of the skin into those of an acute and febrile, and those of a chronic and apyretic character, is generally admitted; but we much fear that too broad a contrast is supposed

to exist between the two, to the oblivion, if not actual denial, of the chronic class being also inflammatory, and of their having, like the acute, their periods of incubation, attack and decline. Few of the diseases of the skin, if carefully watched from their early inception, would be found wanting in these stages; and the chief difference between the two divisions will, on careful analysis, be found to consist in this, that the acute and febrile, after having run a definite course, terminate either in health or death—putting aside, for the moment, complications which do not essentially belong to them; while the slow, or chronic, go through a similar course, but with a termination only temporary and incomplete; so that, after a period, the cutaneous irritation and congestion, or other organic changes are renewed, either in the same or at another region, and go through a series of stages like the first. It is this partial suspension and renewal, more or less complete, according to the hygienic system pursued by the patient, that give reputation, for a season, to a particular remedy or plan of treatment, and tantalizes the sufferer with the prospect of a cure, which, in a short time, is shown to be fallacious. Until we get the measure of these alternations of relief and exasperation, and of the constitutional state and changes accompanying them, we cannot promise ourselves to make any great advances in the rational therapeutics of cutaneous diseases.

In the acute febrile diseases of the skin, and particularly in the exanthemata, or eruptive fevers proper, the mucous membranes suffer often as much as the dermoid texture. Their being primarily affected, has been already adverted to. In the case of the skin, however, the inflammation is generally diffuse, and extends over the entire surface; whereas the mucous membranes are but partially affected, or, at any rate, suffer most in particular regions, as the fauces in scarlatina and small-pox, the air-passages in measles, &c., at any rate, at the beginning or first stage of the disease; while, towards its decline, the lower bowels may become the seat of secondary irritation, or phlogosis, manifested by diarrhoea, or the kidneys be the organs thus secondarily affected, giving rise to albuminaria and anasarca. He who does not continually carry in his mind this connection in function as well as in disease, between the two great divisions of the general tegumentary system, will have very limited views of the pathology of febrile cutaneous diseases, and be not a little embarrassed in arriving at a rational treatment.

In a more advanced part of the present volume, the reader will find a "parallel between the diseases of the skin and those of the mucous membranes," which might have been introduced with advantage, by the author, at a much earlier period. "If we except," says M. Rayer, par 1282, "the white wheals of urticaria and the patches of roseola, we find in the mucous membranes almost the whole of the varieties in form and appearance, presented by the exanthematous inflammations of the skin." "As to the brown, gray, or slate-like discolorations presented by the mucous membranes, in consequence of their inflammation, we observe very similar tints following chronic inflammatory affections of the skin." M. Rayer then proceeds to describe the various forms of eruption on mucous membranes, such as exanthemata, bullæ, vesiculæ, &c., similar to those seen on the skin. Mr. Wilson very properly places rubeola, scarlatina, variola, varicella, vaccinia, under the head of inflammation of the dermis and mucous membranes, with constitutional symptoms of a specific kind. It is now eighteen years since the editor, in his "Syllabus of a Course of Lectures on the Institutes of Medicine and Medical Jurisprudence," printed for the use of his class, (at the Philadelphia Medical Institute) enumerated variola, varicella, rubeola, scarlatina, erysipelas, urticaria, and herpes, as a class designated as "Diseases affecting the cutaneous and mucous systems simultaneously, or cutaneo-mucous diseases." To this conclusion he was the more determinately led by the results of extensive clinical experience in epidemic small-pox, measles and scarlatina.

It is not meant that the treatment of the exanthemata should be described here, in anticipation of the time when it will come up in regular order. One remark, however, of practical importance may be made, viz., that independently of the varieties in their intensity and progress, depending on differences in individual constitution, we meet with great modifications during different epidemic seasons, requiring corresponding changes in treatment; so that scarlatina, for instance,



which in one year will be simple and benign, in another displays greater malignity; and that which, at one time, will be benefited by the use of lancet and free purging, at another will not allow of evacuations of this nature, but, on the contrary, demands early recourse to stimulants.

In the treatment of the chronic affections of the skin, we are yet without systematic therapeutics; but, on the contrary, learned empiricism has too much sway. The chief indications to be fulfilled are, the removal of local excitement, and often inflammation, and a restoration of healthy secretory function. The morbid action, undue determination and secretion, being arrested, there is seldom much difficulty in procuring a ready absorption of the new and abnormal deposits on the dermoid tissue, or between its laminae. In carrying out the above indications, we shall be not a little aided by recurrence to the principles already laid down, respecting the general sameness of dermoid and mucous membranes, (see also Mandl, *Man. d'Anat. Gen.*, p. 537,) and of the sympathy, as well as antagonism of action between these two portions of the tegumentary system, and also as an extension of this principle, the dependence of the cutaneous or local malady on the constitution. In fact, the principles and practice that govern the treatment of a chronic inflammation of a viscus, ought to direct us in that of a cutaneous disease. The dermoid system, says Mandl (*op. cit.* p. 547), may be regarded as an extended gland, secreting solid matters, viz., the epidermis and the epithelium. Hence, while we abate the afflux by purgatives and diuretics, we soothe irritation by baths of various kinds, and at such a temperature as the experience of the patient and the powers of reaction may justify. After perseverance, for a period, in this course, we direct some one, or a succession, it may be, of those medicinal substances which are believed to display alterative properties. These are referrible to two great classes: the abaters of action, or contra-stimulants proper, and those which tend to remove, by absorption, and renovate the tissues. Among the former, the antimonial preparations, represented by tartar emetic, are entitled to a precedence, and next among the mercurials, calomel and blue mass. The latter display very decided powers of reducing morbid excitement of the membranes; and on this account, as well as by their beneficial action on the mucous membranes and digestive apparatus generally, they are entitled to rank high, in the list of curative agents, in protracted chronic affections of the skin depending on inflammation. Mercurials may well be alternated with tartar emetic, by their being given in small doses, and aided by large use of diluents, so that neither the stomach nor bowels shall be harassed or disturbed nor pyalism be induced. The warm or vapour-bath, regularly employed, is an extremely useful adjuvant to the medicines just mentioned.

Without foregoing the use of antimonials and mercurials, even where they have not answered expectation, recourse might be had to salines; either those of a purgative or a diuretic nature, and particularly the latter. Various mineral waters answer a good purpose in this way, after having, it is presumable, entered largely into the circulation and penetrated into the dermoid tissue. Still contributing to the end proposed, of abating cutaneous excitement and modifying morbid secretion of the skin, will be the administration of colchicum and digitalis. The first of these can be usefully combined with salines or alkalies, or magnesia, according to the state of the primæ viæ, and the propriety of acting on the bowels or of modifying the renal secretion.

Narcotics,—hyoscyamus, belladonna, stramonium, dulcamara, and conium—are also coincident with the measures just proposed; and they may be combined with mercurials or the tartar emetic, or given alone. They not only allay irritation of the skin, but abate, by their effect on the nervous system, the process of morbid nutrition and deposit. It is not desirable to give any of them in a dose beyond that which produces some sensible effect as evidence of the purity of the article. More is gained by their regular use for a length of time than by the administration of large doses, whose operation may be too manifestly narcotic. The alternate or even combined use of this class of medicines with alkalies, is often decidedly efficacious in numerous cutaneous diseases, in which there prevails either irritation of the skin itself, or of the digestive mucous surfaces, or of the renal apparatus.

The external medication in harmony with the internal, as just recommended, will consist in the employment of the warm, or tepid, or simple vapour bath, warm fomentations or emollient cataplasms, and infusions of some narcotics, or ointments of the latter. Preparations of lead, and more particularly of the subacetate adequately diluted, will, in some cases in which the disease is of circumscribed extent, exert a sedative effect. Recourse to articles of this nature ought, however, always to follow the general or constitutional treatment, and to be used with great circumspection, if at all, in those forms of disease which assume an ulcerous character, and have been long discharging, and which we may encounter in children during dentition, or in aged persons.

When, on the other hand, either from the duration of the disease, and the subsidence of irritation and excitement, and the absence of disorder of the digestive mucous surfaces, or the want of success from the soothing treatment, more stimulating remedies are demanded, we shall have recourse to sulphur, iodine, arsenic, cantharides, and the different mineral and vegetable tonics and astringents.

Sulphur has long enjoyed a great reputation for the cure of some of the most common, and at the same time occasionally inveterate diseases, such as scabies, or itch and lepra. But, if had recourse to early, when there is yet much irritation and vascular excitement, or if it fail to purge, this medicine will not only disappoint us of the desired effect, but prove positively injurious. Hence, it is most efficacious when combined with salines in either natural or factitious mineral waters, or, as in the popular formula, with cream of tartar, and occasionally with magnesia. Used in this manner, the sulphur practice is a transition from the reducing or sedative to the stimulating plan of cure; and may be well entitled to a trial before medicines of more power, either for good or evil, are resorted to. In lymphatic temperaments, and in broken-down constitutions, suffering from scrofulous eruptions, sulphur may be given at the same time with some preparation of iron, or, if the indications be more direct, with a vegetable bitter. In venereal eruptions it will be administered in conjunction with mercury.

Iodine preparations are contra-indicated in those cases in which there is either much vascular or nervous excitement, or in which gastro-enteric irritation prevails. The least stimulating form is the iodide of potassium; the most so, the alcoholic tincture of the iodine itself. Between these two are the compound solution and compound tincture of iodine. Largely diluted in a solution of some purgative salt, the iodide of potassium may be administered after the subsidence of the first stage, that of gastro-intestinal and febrile irritation, of various cutaneous diseases, and more especially the papular and tubercular forms. In this state of combination, or even alone largely diluted, the iodide can be continued for a length of time, until every tissue is permeated, and in a degree, its organic nutrition modified. It often comes in opportunely to relieve the depression of the system and feeling of wretchedness induced by the uncalled for, or excessive use of mercury, and realizes that which was expected from the latter.

No benefit can be promised from the tincture of iodine that is not procurable with less inconvenience and drawback from the iodide of potassium, or if a more stimulating preparation than this latter be desired, we have the solution of the ioduretted iodide of potassium, or the compound solution of iodide of potassium. The use of this medicine will be alternated with that of compound saline waters and sometimes in conjunction with them, and some one or other of the narcotics, where the irritation of the skin, even in the chronic stage of the disease, is still considerable. Its use is compatible with abundant nutriment, should this be deemed advisable, and especially so in anæmic subjects, and also in those of a lymphatic temperament.

Arsenical preparations used in the appropriate period of a cutaneous disease, that is, when the stage of inflammatory and irritative excitement has subsided and when there is no complication of gastro-enteritis, have often a singularly good effect. They are particularly adapted to the squamous or sealy affections of the skin. The dose should be small, and, if symptoms of irritation are induced by the medicine, conium or some other narcotic should be associated with it. The safest formula for the administration of arsenic is the solution of the arsenite of potassa, or Fowler's solution, as it is more generally



called. Of late, the solution of the iodide of arsenic and mercury, or Donovan's solution has been given with great success in obstinate cases of long standing, particularly those of syphilitic eruption and of lupus.

Arsenic requires more care in its administration in sanguineo-nervous habits, and in these the customary cautions respecting its use should be promptly enforced. When the patient feels any febrile movement, heat, thirst and a feeling of weight and heat at the epigastrium, or complains of heaviness and pricking sensation about the eyelids followed by puffiness of these parts, the use of the medicine should be suspended, and in its place mild aperients prescribed. The resumption of the arsenical preparation must be in a smaller dose than that in which it was first administered.

Cantharides is a remedy of great power in certain chronic skin diseases, as eczema, lepra and psoriasis; but its exhibition requires caution, and it should not be continued after any symptoms of urinary irritation are manifested.

There are two stages of chronic cutaneous diseases in which the state of the constitution requires careful notice, and the use of active general remedies, but of opposite characters. Of the first, or that of excitement, I have already spoken, as well as of the depleting and sedative remedies required for its removal. In the second, or that of debility and imperfect nutrition, owing to chronic derangement of the digestive organs, a tonic course is indicated. This may be either the primary one, or adjuvant to the special treatment; as when we administer iron, in addition to, or in combination with, sulphur or iodine; quinine with mercury. In all cases of complication of constitutional disorder with chronic cutaneous affections, it will be wiser to make the removal of the former the chief object, and to direct the remedies for the latter in this subordination. The iodide of iron, in the form of solution, as directed to be prepared in the Pharmacopœia of the United States, is adapted to a large number of cutaneous diseases of a chronic character, occurring in cachectic habits or in constitutions that have long suffered from disorder of the digestive apparatus. Auxiliary to its tonico-alterative effects, are the vegetable bitters and certain depurative syrups, such as the compound syrup of sarsaparilla, syrup of pipsissewa, &c.

In anemic constitutions, and particularly in female subjects, suffering from chronic cutaneous diseases, the prolonged use of a chalybeate, combined or in alternation with a laxative, will be productive of much good; as will the sulphate of quinia in those who have been afflicted with periodical fever in its various forms.

In the external or local treatment, of a stimulating kind, great importance has always been attached to baths, in which various substances of an active nature have been held in solution. In aid of internal remedies these will often do much good. Trusted to alone, they will more generally fail us. This class includes the simple and the medicated warm and hot baths. The most conspicuous of the latter are those largely impregnated with sulphur, iodine, corrosive sublimate (bichloride of mercury) the alkalies and mineral acids; the two former are combined either with water or with vapour.

Preparatory to the systematic and prolonged employment of stimulating baths, it will be proper to subject the patient for some time to the use of the simple warm water or vapour bath; both as a means of removing any remaining excitement of the cutaneous system, and as an aid to diagnosis, by revealing more completely the physiognomy of the disease. The real state of the dermis may be masked by the white branny scales covering its diseased regions, as in the squamæ, or by dry scabs, as in *favus* and *impetigo*. These removed, we often find active dermoid inflammation, requiring a soothing and sedative treatment in place of stimulating applications, that seemed to be indicated by superficial signs of an indolent state of the parts. Plumbe (p. 41) points out the difficulty of diagnosis in many cases of scalled head of pauper females, in which he had to deal with masses of scabs, and scales interwoven and matted with the hair of these parts, requiring for their removal ointment, the use of soap and warm water, before an opportunity was offered of examining the diseased cutis. In all chronic affections of the skin, a sponge dipped in warm water should be rubbed over a part, at least, of the diseased surface, and the slightly adherent cuticle removed, so as to allow of the real state of the dermoid tissue being seen.

Of the stimulating baths, those of the sulphurous kind have been the

most extensively used, and productive of the greatest good in a large number of diseases of the skin. Their beneficial operation depends mainly on their temperature and duration, as already indicated by M. Rayer, parag. 127. Little can be expected from a sulphur bath, unless it be at least 90° F.; but in chronic disease and in apyretic states of the system, it may be brought nearly to blood heat. When the patient is required to spend a long time in the bath, and from one to three or four hours is not an uncommon period, the temperature should be such as just to convey a grateful sensation of warmth, and no more. By this protracted immersion time is allowed both for the passage of the simple fluid and its medicated constituent, through the epidermis to the dermis, and for the textural and vital modifications of this latter requisite for the removal of the disease. It needs little reasoning to show, that the period in which the external treatment by bathing is carried on, is that in which alteratives of various kinds may be resorted to; and, if they do not exert a principal effect in procuring a favourable result by their action on the capillaries, saline and sulphurous mineral waters, natural or factitious, blue mass, or iodide of potassium, according as there is any constitutional excitement or syphilitic or scrofulous taint, will be found to meet the indications at this time.

Experience has not yet enabled us to define the cases in which the water-sulphurous bath should be preferred in the dry vapour or sulphurous fumigation. In a general way, the latter may be said to be best adapted to old forms of cutaneous disease, in habits in which there are a languid circulation and general debility. It is true that patients often complain of exhaustion after these fumigations; but the debility is here obviously of the indirect kind, following increased activity of the circulatory and respiratory functions.

The alkaline sulphurets, as those of potassa and soda, or rather of potassium and of sodium, are employed in the composition of artificial baths—in various proportions and combined with other matters. One of the formula, recommended by M. Rayer, consists in dissolving 3iv of sulphuret of potassium in thirty gallons of water. It must be prepared in a wooden bathing vessel. Dupuytren's gelatino-sulphurous bath is prepared by adding one pound of Flanders glue (previously dissolved in water) to the sulphuretted bath just described. This is an imitation of the Barèges waters, so celebrated in France for the cure of obstinate diseases of the skin; although recent analysis (by M. Longchamp) shows that sulphuret of sodium is the predominant compound into which sulphur enters in these waters. Their temperature, in the different springs, is from 85° F. to 114° F. Of 111 military men affected with various forms of psoriasis and impetigo, vaguely called herpetic disorders, who visited Barèges in 1829, 66 were cured. The cures of the more simple kinds, 51 in number, were 31. The proper imitation of the Barèges water for bathing is as follows: crystallized sulphuret of sodium, carbonate of soda (crystallized), chloride of sodium of each 64 grammes; pure water 320 grammes. These salts are to be dissolved in the water, and the solution is to be promptly poured into a bottle closely corked. This quantity will serve for a common bath of about twenty gallons.

Baths of water impregnated with iodine, or the iodide of potassium, in different degrees of strength, have been spoken of by M. Rayer and the formulæ, after M. Lugol, for their preparation will be found in the "formulary" at the end of this volume. Iodine may be readily vapourized in water of a moderate heat, and in this way applied to the cutaneous surface for the required period.

Washes made of a solution of corrosive sublimate, are more used than a general bath of this salt. The solution of the bichloride of mercury of the London Pharmacopœia is made of ten grains of the mercurial salt and the same quantity of hydrochlorate of ammonia, dissolved in a pint of water. Diluted with an equal quantity of water, this solution is used as a wash for herpetic and scabious eruptions. In smaller proportion, or half a grain to a pint of water, Baume recommended the solution in the form of a pediluvium, to produce salivation. He directed the feet to be immersed in it for a period of two hours. Such a practice will be found for the most part inert, as this salt of mercury, externally applied, is little liable to salivate unless the cuticle be removed or abraded.

Alkaline baths have been occasionally used with advantage in some chronic cutaneous diseases; but whether as simple exciters



of the skin, or acting on it chemically, we are not apprised (see parag. 131).

Still more decided benefits may be expected from baths, to which some one of the mineral acids, and particularly the nitric, and nitromuriatic or nitro-hydrochloric acid, has been added, in the proportion of 6 to 8 fluid ounces of the latter to 30 gallons water, in a wooden tub. Where we are prevented from directing the internal administration of the mineral acids, of which M. Rayer thinks so highly, (parag. 165,) recourse should be had to their employment externally under the same conditions as those that govern them in the former case.

Belonging to the class of stimulating baths, are those of sea-water, brought up to the degree of blood heat, or a little below, as at 96° F. In torpid habits the temperature of the bath may extend beyond 100° F.

If the situation and circumstances of the patient do not allow of recourse to medicated baths, a good substitute will be found in applying the active articles, such as sulphur and iodine, and even the mineral acids, in the form of ointment. Iodine, in this way, has been found to be one of the best remedies, especially when conjoined with its administration externally, in *prurigo senilis*. To give full efficacy, however, to this form of medication, a simple water or vapour bath should be employed daily, or on alternate days, so as to place the skin in the most favourable state for absorption, and to remove partially detached epidermis and adherent morbid secretions. If the disease embrace an extended cutaneous surface, it will be better to rub in carefully the ointment prescribed for the occasion, on a limited region at one time, and then apply it in like manner to another, than to attempt to anoint the entire surface, and most probably fail thereby in doing justice to any one portion.

To the class of external stimulating applications belong, in an eminent degree, those of a caustic or escharotic character, such as chlorine, nitrate of silver in substance, corrosive sublimate in strong solution, tincture of iodine, iodide of mercury, chloride of antimony, sub-acetate of copper, &c., and of a somewhat milder nature solutions of the chlorides of soda and lime, and, with a different view, again, cantharides. I shall not pretend to specify the distinctive merits of these substances, if at any time such an attempt could be successful, but content myself with mentioning that in the milder forms of herpetic eruptions, I have found washes of the chloride of soda or of lime answer a good purpose; and, in the more obstinate diseases, I give the preference to the nitrate of silver. In a bad case of favus (*fungus favosa*) of several years' duration, in which the greater part of the hairy scalp was implicated, I succeeded in entirely removing the disease, by having the head kept shaved and applying a strong ointment of nitrate of silver; administering, however, at the same time, laxatives and iodide of potassium in small doses.

Of all the modes of treatment of chronic diseases of the skin, there is none comparable, for successful and permanent results, to the hygienic; nor can we place any reliance on the most approved therapeutical remedies, unless the rules of hygiene be implicitly followed. All careful observers of the affections of the skin, must be sensible of this truth, which it is difficult, however, to impress fully on the minds of the patients themselves. Impatient to be relieved of a troublesome disease, they fly from doctor to doctor, trying every remedy in quick succession, sometimes at the peril of their lives; but refusing, often, to abide by the dietetic conditions on which alone their cure mainly depends. M. Rayer has pointed out (parag. 113–117) the good effects procurable from an appropriate diet, and, in some cases, from fasting, and the mischief ensuing on errors in regimen. I was early impressed with the facts mentioned by Alibert, (*Precis. Théorique et Pratique sur les Maladies de la Peau*), of a milk and vegetable diet bringing about the cure of some of the most protracted diseases of the skin, which had been rebellious to all other modes of treatment.

But it is not enough for patients to take proper food; they must also enjoy the advantages of adequate exercise and breathe a pure air, at the same time, also, that justice is done to the skin itself, by avoidance of the extremes of temperature, and by recourse, at short intervals, to the use of the bath. Alibert states his having had fre-

quent occasion to observe that, at the hospital of St. Louis, herpetic eruptions, of various kinds, were kept up by defective nutriment and an impure air. In view of the whole subject, the habitual frame of mind must not be overlooked, nor pains omitted to give it a healthy tone.

Coming, also, under the head of hygiene, is change of climate, which in some cases develops, while in others it cures certain cutaneous affections.

The question, to what extent the physician is justified in curing chronic affections of the skin, in reference to any danger of more serious internal disease occurring afterwards, does not admit of a decided answer. All the circumstances of the case must be taken into consideration; the time when the eruption first appeared, whether it followed immediately on some visceral disease; its duration; the general health of the patient at the time; his inherent or acquired tendencies to particular diseases. In those predisposed to phthisis pulmonalis, or to cerebral disease, epilepsy or mania, for example, we should attempt, with great diffidence, any means of suddenly removing the cutaneous eruption; or, if this is done, it ought not to be by external remedies, but rather, mainly, by internal treatment and the use of counter-irritants, or the substitution, for awhile, of a drain by a small blister, or tartar emetic, &c. In children, and in aged persons, the greatest reserve must be exercised in the use of any repellents to the skin, by which either chronic eruptions may be driven away, or chronic sores dried up.

J. B.

## SECTION I.

### INFLAMMATIONS HAVING A SINGLE ELEMENTARY FORM.

#### I. EXANTHEMATA.

##### Vocabulary, Art. *Exanthema*. *Exanthematous*.

209. I have designated by the title of *exanthemata* several inflammatory diseases of the skin which are characterized externally, at their *acme* or highest degree of development, by the morbid accumulation of blood in a point, a district, or the entire surface of the integuments. These inflammations terminate in resolution, in delitescence or recession, and in desquamation.

This group comprises erythema, erysipelas, rubeola, scarlatina, roseola, urticaria, and several inflammations artificially produced.

210. The common and generic anatomical character of these inflammations is the *red tint* in the parts of the skin affected; the red colour disappears on pressure, and returns immediately on its removal. The injection of the skin, which is slight in roseola and rubeola, and often very passing in urticaria, is more intense and permanent in erythema and erysipelas. Its principal seat is in the vascular network of the skin; but in erysipelas, urticaria, and even in rubeola and scarlatina, it will sometimes extend to the subcutaneous cellular tissue.

The degrees of heat and tumefaction attending the exanthemata are very various. The same thing may be said of the pain, which is sometimes not complained of in roseola, but is often tense and continuous in erysipelas.

When these diseases terminate in resolution the epidermis is detached in scales, as in scarlatina and erysipelas, and in almost imperceptible furfuræ in rubeola and roseola. The greater the injection of the skin has been, the more considerable is the subsequent desquamation; and the thicker the epidermis is, as on the hands, the elbows, and soles of the feet, the more apparent is the process. After the detachment of the epidermis, the skin is smooth and shining, and often redder than in the natural state. After one desquamation in the exanthemata, particularly in scarlatina, a second is often observed to



occur. It would appear in this case that some remains of inflammation keep up the epidermic secretion in excess; in fact, it is only after the skin has lost the morbid redness it had acquired, that the new epidermis puts on the appearance of that which covers the healthy integuments. During convalescence from and at the crisis of several acute diseases, the epidermis is detached from the skin without its having been sensibly inflamed.

211. When death happens on the invasion or during the height of an exanthematous inflammation, if the body be examined a few hours afterwards, scarcely can a few injected capillaries be detected on the surface of the parts that were inflamed. The swelling of the cellular tissue also, is always much less than during life. If the body be inspected several days after death, the epidermis may be detached more readily than from skin unaffected by disease. The epidermis in a general way is found to come from off the sacral region and the trochanters more easily than from any other part, for no other cause apparently than the previous irritation the skin has undergone from the recumbent posture of the patients during their lives.

212. The cutaneous exanthemata coincide with inflammations of the same nature of the gastro-pulmonary mucous membrane. Many of them, indeed, only possess interest in a practical point of view, by reason of these important relations. Among the precursory phenomena which often usher in an attack of exanthematous inflammation, there are some, such as shivering fits followed by moist warmth of skin and frequency of pulse, which are rather expressive of disturbance of the functions generally than of a local affection; others, again, such as redness of the edges and point of the tongue, a greater or less degree of thirst, distaste for animal food, difficulty of deglutition, cough and bronchial rattle, &c., are evidently indicative of an association of some degree of inflammation of the internal mucous membranes with that of the skin.<sup>1</sup> There is sometimes a pretty exact relation between the intensity of the inflammation of the skin and that of these membranes; more frequently, on the contrary, the external evolution of the exanthemata is interrupted by the occurrence in any degree of intensity of such gastro-intestinal, pulmonary, or cerebral affections. It may sometimes happen, too, that other lesions are associated with these already complicated circumstances, which are rendered additionally dangerous according to the importance of the organs implicated and the nature of the cause that produces the additional derangement in the functions.

213. Exanthematous inflammations are generally acute and continued in their progress, and do not often last more than from two to three weeks. Several of them, however, do occur with the intermittent type. These are, indeed, the only class of inflammations of the skin which seem capable of coming on in paroxysms and of presenting true intermissions. When not consequent on a distinct febrile attack, these intermittent phlegmasiæ of the skin most commonly appear during the exacerbations of some affection of the digestive organs, a condition the influence of which is particularly remarkable in the production of urticaria and intermittent erysipelas.

214. In the exanthemata, the limits of the dermis and vascular rete are much more easily demonstrated than on the healthy skin; a simple incision through the substance of the skin is enough to exhibit these two layers; it is then, in truth, as M. Gendrin well observes, if at any time, that we must be induced to conclude that the vascular reticulation and the dermis form two distinct and superposed membranes. When the inflammation has run high, the vascular rete is of a red, and even of a brownish colour, as in erythema nodosum, rubeola, nigra, and gangrenous erysipelas; a certain quantity of blood then appears to be extravasated into the tissue of the skin. Lastly, there sometimes exists an infiltration of serum into the cells of the dermis, a circumstance that frequently happens in erysipelas and scarlatina.

215. The exanthemata at their acme cannot be confounded with any other order of the inflammatory affections of the integuments. When we have to distinguish between the species that compose this group, and to detect them at the bedside of the patient, we must not forget that three other affections implicating the skin may also present themselves under the form of exanthemata, namely, *exanthematous* burn, frost-bite, and syphilis. Among negroes, the red tint of the

exanthemata is of course obscure, and their diagnosis, therefore, more difficult than among whites.

The red colour produced by effusions of blood into the subcutaneous cellular tissue or into the substance of the skin itself, differs from that of the exanthemata in this, that it cannot be made to disappear by pressure. This circumstance, as well as other considerations derivable from the nature of the diseases, should have kept Willan from placing petechial affections and purpura hemorrhagica among the exanthemata. In papular and squamous inflammations, after the detachment or removal of the epidermis, and in vesicular bullous and pustular inflammation after the fall of the scabs, red blotches are perceived upon the surface of the body which are easily distinguished from the primary efflorescence of the exanthemata, by their form and their standing, by the history of the changes the skin had undergone before the appearance of these spots, or better still, by leaving them to themselves for a few days, and giving them an opportunity to put on their essential characters. (a)

(a) The progressive changes on the skin, in the exanthemata, are well described by M. E. Wilson, (*op. cit.*) as follows.

"The immediate seat of the inflammatory congestion of the exanthemata is the vascular rete of the dermis, and the difference of tint observable in these diseases at their height and during their decline, is sufficiently explained by reference to the structure and normal phenomena of the skin. When the degree of excitation of the cutaneous nerves is small, and the arterial determination but little exalted above the ordinary standard, the vascular rete of the dermis is only partially congested, and the redness produced by this congestion is slight; such is the redness, with slight modifications depending on degrees of intensity of nervous excitement, which is seen in erysipelas, roseola, and erythema. When, however, the nervous activity is aroused to its highest pitch of energy, as in scarlatina, the congestion is most intense, and the bright scarlet of the arterial blood coursing through its vessels is little obscured by the thin veil of epidermis which binds it in its sphere. The congestion in rubeola, scarlatina, and variola, is not confined to the parallel strata of the vascular rete of the dermis, as in the second group of exanthemata, but many of the papillæ of the dermis are also distended with blood, and give rise to that punctiform appearance of the redness which is characteristic of these eruptions.

"The crescentic form of the congested patches seen in rubeola, depends upon some unexplained peculiarity in the distribution of the cutaneous nerves, and corresponds with that natural appearance of the skin which is so frequently seen in healthy children, and which is denominated mottled. Again, I have observed, that in injecting the limb of an infant with size and vermilion, I can imitate all the forms of redness seen in the exanthematous diseases, by ceasing to inject from time to time, or by filling the capillaries to their utmost.

"The decline of congestion of the dermis is accompanied by certain alterations in the tint of redness which betokens its presence. Thus the red patches are observed to lose their vivid brightness, to become duller in their hue, and to pass through various shades of purple, until they become bluish and livid. These changes depend upon the degree of excitement of the cutaneous nerves at the several periods indicated by alteration in the colour of the exanthem. When the nervous energy is at its highest point, the capillaries contract actively upon their contents, and maintain a rapid current of arterial blood through their channels. But as the nervous excitement becomes gradually allayed, the capillaries lose their power to contract, and become distended by the full stream that moves more and more tardily onwards in its course, giving time to the arterial current to combine with the carbon of the tissues through which it flows, and become converted into venous blood.

"The above phenomena will explain, also, the differences of colour which the exanthem may assume at an earlier period than its decline, and even from the commencement of its appearance, as, for instance, in scarlatina maligna, or more strikingly, in rubeola nigra. The first step or motive influence by which this change is effected, is depression of nervous power; this depression, depriving the capillaries of their tonic power, or, in other words, of their means of resisting the pressure of the arterial current, they yield, they become dilated, and from

<sup>1</sup> Talma. Diss. sur les maladies éruptives, in-4. Paris, 1819, No. 25.



216. The exanthemata sometimes complicate other inflammatory affections of the skin, and in particular those of a papular, vesicular and bullous kind. Severe erysipelas, left to itself, is often accompanied by bullæ similar to those of pemphigus; viewed in this way it seems to form the intermediate link between the exanthematous and bullous forms of inflammation.

The determination of the other affections that may be associated with the exanthemata is one of the most interesting points in diagnosis: and it is always of importance to establish distinctions between these complicated instances and the more simple cases before laying down rules of treatment.

#### ERYTHEMA.

Vocab. Art. *Erythema*, *Efflorescence*, *Red-gum*, *Intertrigo*, *Maculæ volatiles*.

217. Erythema is an uninfected exanthema occurring without fever, characterized by one or more red blotches, varying from a few lines to many inches in diameter, confined to one or scattered over several regions of the body, the duration of which, in the acute state, varies from one to two weeks.

218. Acute erythema presents seven principal varieties: 1st. *Erythema intertrigo*. In new-born babes and persons who are somewhat corpulent, the repeated rubbing of two contiguous surfaces sometimes gives rise to this variety, which may occur under the mammæ, in the axilla, the groins, the upper part of the thighs, the navel, between the buttocks, and, generally, wherever the skin lies in folds, or is wrinkled. Intertrigo may also be occasioned by the contact of the

capillaries, which they were, they are converted into a venous plexus, through which the blood moves feebly and slowly, gathering carbon in its tardy course.

"Congestion of the capillary rete of the dermis necessarily gives rise to tumefaction, the extent of swelling being, to a certain degree, the measure of the increased quantity of blood distributed through the part. Hence it is obvious that all exanthematous patches must be raised above the level of the surrounding skin, even although the degree of tumefaction be really very slight.

"Another cause of tumefaction in an inflamed and congested tissue, also follows as a natural consequence from the over-distension of its vessels. I have already endeavoured to show that the nervous excitation of the part must have diminished before over-distension of the capillary vessels can take place, but so soon as that change has ensued, another phenomenon is immediately developed. This is transudation of the watery part of the blood by imbibition into the surrounding textures, thereby physically relieving the congested vessels of their overload of fluid. The fluid which is thus transuded through the coats of the vessels is serum, containing in solution more or less of fibrin. The seat of this imbibition is for the most part the subcutaneous areolar tissue, where it gives rise to œdema. I may instance scarlatina in some cases, erysipelas œdematosum, and erythema læve, as particular illustrations of this kind of tumefaction, although it will be found, upon close observation, to be much more extensively present among the exanthemata. This important phenomenon is not confined to the dermoid tissues; it occurs also in the mucous membrane, and sometimes with fatal consequences, as, for instance, in the laryngitis of scarlatina and rubcola, where it is apt to induce œdema of the glottis.

"Besides the œdema resulting from serous infiltration into the subdermoid tissues, it may happen that the transudation occurs also in the tissue of the dermis itself, in which case the skin presents a red, bloated, and brawn-like appearance, as in some forms of erysipelas. Or again, not confined to the subdermoid and dermoid tissues, the serous fluid may, after the repletion of those textures, be effused upon the surface of the dermis, and raise the epidermis in the form of vesicles and bullæ, as we frequently see to be the case in common erysipelas. This character associates erysipelas with the third natural group of diseases of the skin—namely, with inflammation of the dermis, combined with serous effusion upon its surface, including the orders Bullæ and Vesiculæ of Willan."

matter of fluor albus, and of gonorrhœa, by the dribbling of the urine, or escape of the fœces, by the flow of the tears, of the mucus of the nose, &c. In the intertrigo *podicis* of new-born infants, or in that which sometimes occurs about the groins and upper parts of the thighs in women who neglect proper attention to cleanliness, a sero-purulent fluid of a faint and disagreeable smell, accompanied by severe itching, often exudes for several days at a time from the inflamed surface of the skin. If this affection continues unchecked, and the causes that first produced it be allowed to continue, the skin becomes hard, and presents chaps of different depths, indicated by red lines traversing the moist and grayish-white coloured surface of the affected parts. When intertrigo appears between the toes, on the vulva, the prepuce, the margin of the anus, &c., these parts are always affected sooner or later with chaps and excoriations.

Dr. Ehrenberg<sup>1</sup> has given an account of a remarkable variety of intertrigo which attacked all hands on board of a vessel in the Red Sea. The skin of the scrotum was much inflamed, very painful, and at the same time greatly relaxed; a purulent secretion exuded from its whole surface; the disease disappeared as soon as the crew disembarked; but returned often and suddenly on the men again rejoining the ship. The Arabs suffered less than the Turks.

In infants at the breast ill-tended, and dressed with linen impregnated with urine and fœces, spots of erythema are often observed on the buttocks, the upper parts of the thighs, and on the scrotum, which are of a bright red colour, without any elevation of the surfaces attacked. The skin thus inflamed is hotter than in other parts of the body; the subcutaneous cellular tissue is not swelled, but the pulse is sometimes frequent. Children also while teething, have often spots of a bright red colour on the cheeks, which are hot but unaccompanied with tumefaction of the subjacent cellular tissue. There is at the same time heat of the mouth, pain and swelling of the gums, dribbling of the saliva, and the disposition to be constantly chewing. These red spots, at first merely accidental and temporary, sometimes end by becoming fixed; and then the heat and redness having subsided, the skin of the cheeks is left rough and chapped.

Prolonged walking or riding, constant pressure, by lying or otherwise on the same place (eryth. *paratrimma*), the prick of a needle, or the sting of an insect (eryth. *a punctura*), the morbid distension of the skin from œdema or anasarca (eryth. *læve*, Willan), the neighbourhood of a pustular or vesicular inflammation, or of an ulcer or a wound, all frequently cause this superficial inflammation of the skin, which differs from intertrigo in nothing but being unaccompanied by any morbid secretion.

2d. *Erythema papulatum* (Willan). This shows itself most frequently in females and young people, commonly on the back of the hands, on the neck, the face, the breast, the arms and forearms. The small red spots that characterize it are irregularly rounded and seldom exceed the size of a small lentil, or a large split-pea; they are slightly prominent, and as it were papular; of a bright red at the commencement, they soon assume a violet hue, particularly about their centres; they disappear almost entirely under the pressure of the finger. This eruption is commonly enough preceded by some degree of fever and sense of lassitude and weakness, by anorexia, and pains in the limbs. It sometimes shows itself in individuals labouring under acute rheumatism (*rheumatic eruptive fever*). The spots may be numerous, and by their junction form irregular groups of variable, sometimes of considerable, extent; within a day or two they sink to the level of the skin that surrounds them, and the redness itself disappears after continuing one or two weeks most generally without any perceptible desquamation.

3d. *Erythema tuberculatum* differs from the preceding variety in the occurrence between the papular-looking patches, of numbers of small, slightly prominent tumours, which sink down within a week, whilst the patches disappear more slowly, becoming livid and only vanishing after a week more. The erythema tuberculatum is preceded by fever, and accompanied, during its course, by general uneasiness and sleepless nights.

4th. In females, children, and young persons of weakly constitution and lymphatic temperament, another variety of erythema is rather

<sup>1</sup> Bulletin des Sciences médicales de Férussac, t. xiii. p. 232.



frequently observed—the erythema *nodosum* of Willan. General uneasiness, depression, and slight fever precede by a few days, or accompany the evolution of this eruption, which commonly appears on the arms and fore parts of the legs, under the form of red oval spots, slightly elevated in the centre, and varying in extent from a few lines to an inch and a half in their greatest diameter. By passing the hand along these spots, they are felt to form true elevations on the skin. These small red and painful tumours, the greater diameters of which are parallel to the trunk when they occur on the legs, seem hastening to suppuration; but their size soon diminishes; a bluish colour takes the place of their primary red tint, and they are resolved in the space of ten or twelve days, leaving behind them bluish or yellowish stains, as if the skin had been bruised. I have seen this species of erythema come on during the course of a rheumatic attack, having been preceded by very severe pain.

5th. The erythema *marginatum* is characterized by circular patches of a livid red, from half an inch to an inch in diameter, the circumference of which is distinctly separated from the healthy skin, raised, prominent, and slightly papular; their shining surface appears vesicular, but there is no actual effusion of serum beneath the cuticle. These spots, which may be preceded or accompanied by febrile symptoms, appear on all parts of the body, on the limbs, the face, the hairy scalp, and even on the conjunctiva.

6th. The patches of erythema sometimes form complete circles, the centres of which are healthy (eryth. *circinnatum*). The circular form of this variety seems to assimilate it to the herpes circinnatus, but it differs essentially from this disease in the absence of vesicles as well as in its progress and duration. It is still farther removed from the rings which are observed in the train of lichen circumscripatus, and of lepra, the cure of which diseases has commenced and gone on from the centres towards the circumference of the patches.

7th. Erythema *fugax* is the title given to that variety in which the redness is greatly diffused, always superficial, without appreciable swelling of the skin or subcutaneous cellular membrane, and which occurs unqually spread over the different regions of the body. This red colour of the integuments often differs little from the natural hue; but the skin is dry, and the heat of surface always higher than the proper temperature of the body. Both the arms of an adult labouring under doli-enteritis or furunculous inflammation of the bowels were observed on the day of his reception into La Charité to be of nearly as vivid a red as is observed in scarlatina; I caused him to be bled; and in thirty-six hours the redness had disappeared. This eruption may occur in an intermittent form, or appear and disappear under the influence of febrile exacerbations or paroxysms. When it happens towards the end of serious disorders, all traces of it vanish after death, and sometimes also on the approach of dissolution. This form of erythema is usually followed by desquamation of the cuticle, and occasionally, when it has continued long, by the loss of the hair; phenomena which do not occur till a week or a fortnight after the disappearance of the redness of the integuments.

219. *Chronic erythemata*. The workmen who use putrid urine in cleansing and whitening woolen cloths, bricklayers and masons who handle quicklime, miners and smelters employed in extracting lead and copper from their ores, blacksmiths and others exposed habitually to intense heats, are often attacked with chronic exanthemata of the hands. The skin first red, then dry and scaly, becomes hard, chaps, and is never bent without increasing the cracks, which usually cross the palm transversely betwixt the thumb and forefinger. The skin is rarely cleft through its whole thickness; the edges of the crevices are hard, and their bottoms often bleed, especially in the winter season.

Chronic erythema and chaps of the feet are only seen in those persons who walk about with these parts uncovered, or who go without stockings and neglect proper cleanliness. When the feet are chapped, the cracks run across the heels, along the lines of the sole, or between the toes.

The lips also have their erythemata, and are often chapped, especially, in the opposite extremes of intense cold or excessive heat, or during the continuance of a very dry and parching state of the air.

In women nursing, especially for the first time, the repeated application of the child and its eager suction, often excite erythematous inflammation of the nipple, which sometimes runs so high as to force

the mother to give up suckling, each visit of the infant causing intolerable pain, followed by sleeplessness and fever. The chaps that follow have been seen surrounding the base of the nipple, and penetrating so deep as to cause this part to be detached altogether, an event which is usually succeeded by ulceration to a greater or less extent of the mamma.

Pregnant women, too, during the last months of gestation, when the integuments of the abdomen are suffering the greatest distension, now and then suffer from *redness* and *chapping* of the skin of the belly. The same thing happens in the same place and also in the legs of those who are suffering under dropsy.

The chaps of the verge of the anus may be the effect of erythema and other chronic inflammations of the rectum, or of some excessive distension of this opening caused by the excretion of hard and bulky feces. Chaps in this situation are often complicated with a spasmodic stricture of the anus.

Chaps of the *prepuce* are sometimes caused by the erection of the penis, which distends and splits the part when the opening is narrow.

Chapping of the vulva is almost always consecutive to lichen agrius, or to eczema rubrum developed in the genital parts; or otherwise it succeeds to difficult labours, without being sensibly preceded by erythema.

220. Chronic erythema, arising independently of external causes, is often a very obstinate pyretic affection; such is that which is vulgarly designated under the name of *fiery spots*, (*taches de feu*), which very often co-exists with rosacea, and succeeds it even more frequently. This variety of erythema is habitually subject to return, and is characterized by a red colour of the skin, which becomes pale under the finger, and by slight vascular arborizations or net-works that spread upon the cheeks, over the cheek-bones, and on the alæ of the nose. It is attended with pruritis, and a feeling of heat and tension, especially when there happens to be any accidental determination of blood to the head or face. Lastly, at the period of the epidemic disease which prevailed at Paris in 1829, I had occasion to observe an immense number of chronic erythematous inflammations of the palms of the hands and soles of the feet; but they were accompanied by so remarkable an epidemic secretion that their description must be included under that of pityriasis *rubra*, or rather of the epidemic disease of which they constituted one of the principal features. (See in the Vocabulary, under the word *Acro-dynia*.)

221. *Diagnosis*.—A previous eruption of vesicles, a more abundant and more serous secretion, and a greater obstinacy of inflammation, distinguish *eczema* of the ear, of the genital organs, of the verge of the anus, of the umbilicus, &c., from *intertrigo* of the same parts. As to the *blenorragia* and *intertrigos* of the navel, especially, account must be taken not only of the appearance of the inflammation, but farther of its cause, to keep us from mistaking these for other affections.

It may be difficult to distinguish the *papular* and *passing* forms of erythema, from some varieties of roseola, although this last disease in its progress bears a greater analogy to the class of eruptive fevers. Urticaria differs from papular erythema by the greater breadth of its spots, by the peculiar itchiness that accompanies it, by its irregular progress, which is often fleeting and intermittent, and by the absence of the violet or livid hue which is observed in erythema. In lichen *urticatus* the papulæ are less in size, rounder and firmer; their colour is not nearly so deep as that of the patches of papular erythema; as in urticaria there is always a great degree of itching present, a symptom which in strophulus is so troublesome as entirely to deprive children of sleep. I have, in fine, seen the papular erythema appearing on the forehead, on the face, and on the breast, after two or three days of feverish symptoms, in such a manner as greatly to stimulate the elevations and spots that precede the development of the pustules of small-pox.

At first sight the violet spots of the papular erythema might be mistaken for syphilitic patches in their first stage; but the progress of the latter, were they accompanied by no other symptom of a venereal taint, would suffice to distinguish them, if even they failed to present the shining appearance and coppery or grayish colour that so peculiarly distinguish them. When these two eruptions occur together in the same patient, the determination of the patches belonging to each requires some discrimination and not a little care.



The very common complication of chronic erythema of the face with rosacea, cannot excuse Peter Frank for having united two diseases so very distinct under the same description. In fact, the erythema is an exanthematous affection, whilst rosacea is decidedly pustular. It is, also, of great importance to distinguish, by means of a careful examination into the state of the different organs, the idiopathic erythema of the buttocks, verge of the anus, scrotum, and lower limbs, caused by filthiness, from that which often coincides in newly-born infants with acute or chronic inflammatory affections of the mucous membranes of the cæcum and colon, and which has very frequently the same appearance. A like redness about the buttocks and genital organs of the infant has also been mistaken, by superficial observers, for symptoms of a syphilitic affection; at the present time such mistakes are, happily, very rare. This variety of erythema, the only one that can be confounded with erysipelas, differs from it by the absence of tumefaction in the subcutaneous cellular membrane. As to the other varieties of erythema, erysipelas is precisely the form of skin disease with which they are least likely to be confounded. The chaps consequent on eczema, lichen, and syphilitic affections of the vulva, margin of the anus, ears and nipples, and the cracks produced by pityriasis or psoriasis of the palms of the hands and soles of the feet, differ from those observed in the chronic erythemata, by being preceded or accompanied by other elementary and characteristic conditions.

Erythema *nodosum* cannot be confounded with any other variety of exanthema: it differs entirely from roseola by the deep tumefaction that characterizes it. It sometimes accompanies attacks of rheumatism. Erythema *annulatum* differs from annular herpes by not being surmounted by vesicles. To the erythema *lave*, some artificial exanthematic inflammations might with propriety be connected.

222. *Prognosis*.—Acute erythemata, whatever their extent, are not in themselves serious complaints, and their duration does not, generally, exceed two or three weeks. Chronic erythemata, produced and kept up by external causes, get well rapidly under proper treatment; but the cure of very old erythemata, that have come on without any evident physical or chemical cause, is as difficult as it is uncertain.

223. *Treatment*.—When the varieties of acute erythema are apyretic, and without complication, they get well of themselves in the space of a week or two. When they are painful or accompanied by fever, they must be treated by means of emollients, by baths and fomentations of the decoction of althea or of bran, gently warmed or almost cold; by general bleeding, if the disease extends to the conjunctiva, and if the patient is of a robust constitution or subject to epistaxis. The diet ought to be cooling; and diluents, such as lemonade, whey, barley-water, &c., ought to be freely used.

The pain and morbid secretion in the intertrigo of children are often diminished by attention to cleanliness, by changing the napkins frequently, and by powdering the inflamed and chapped skin well, after having bathed and cleansed the parts by means of a mucilaginous fomentation.

In adults, when intertrigo *ani* appears to be the effect of riding, or that of the tops of the thigh follows much walking, the skin must be rubbed with tallow softened by heat. When the erythema is produced by pressure or the weight of the body, (eryth. paratrimma, Sauvages,) the part must be covered with some soft or soothing plaster, and the weight of the body and the pressure thrown as much as possible upon other regions. This species of erythema is often accompanied by cutaneous or subcutaneous ecchymosis, a two-fold alteration that is frequently followed by gangrene in patients affected with dothineritis, and in elderly persons. To prevent this unfortunate termination, the decoction of bark, solutions of alum, and infusions of oak bark are sometimes had recourse to with success.

The erythema that is produced by the distension of the skin in œdema and anasarca, is to be treated by cold mucilaginous lotions, by rest, a horizontal position of the limbs, the support of a bandage, and but rarely by the local abstraction of blood, which, however, is sometimes a good measure; in addition to these, the treatment proper in dropsical complaints must be enforced.

The lesions that precede or accompany the development of acute erythematous inflammations, present peculiar indications. General blood-letting is always required at the beginning of a rheumatic eruptive fever; local bleedings from the abdomen or margin of the anus, are often useful in cases of gastro-enteritis, or of cæco-colitis in infants at the breast, attacked at the same time with erythematous affections of the buttocks and thighs.

224. *Chronic erythemata* of the hands and feet, caused by external circumstances, are to be met by warm fomentations and bathing, by soothing cataplasms, and sometimes by vapour baths. Liniments, consisting of oil or lard, to which the oxide of zinc, in the proportion of an eighth [or a little camphor], is sometimes added, are usual remedies for chapped hands and feet. The affected parts are to be smeared, and a glove or leather sock to be worn night and day, in order to restore to the integuments the softness and pliancy they have lost.

Chaps of the nipples are to be treated with mucilaginous fomentations, as decoction of marsh-mallows, poppy-heads, &c., with the addition of a certain quantity of acetate of lead or sulphate of zinc.—The nipple is to be kept anointed with any mild unguent, with which, when the pain is very severe, a small quantity of opium may be mixed. [The nitrate of silver in solution, or mixed with spermaceti ointment, often proves the best of all remedies in this troublesome and, at times, serious complaint.] The nipple must be gently washed with tepid water, before the infant is applied, when nursing is not given up entirely. All remedies, however, commonly prove unavailing, unless the mother consents to deprive the child of its milk for some days at least, as, without this measure, the repeated application of the mouth causes so much irritation that the chaps are continually renewed. The mammaræ are best depleted by the application of a proper cupping-glass furnished with a syringe, or by steaming the breasts over hot water. Should we succeed in healing up the excoriations in this way, suckling may be tried again, provided the secretion of milk has not disappeared.

Chapping of the nipples may sometimes be prevented by habituating the parts to a certain measure of irritation, by gentle suction, previous to delivery, and keeping them covered with a shield of elastic gum, [bee's-wax or silver. The yellow bee's-wax shield to prevent the pressure of the clothes, the application of the nitrate of silver ointment (gr. iv to gr. viii, to ʒss of unguent. cetac. or lard) and the use of the shield and prepared cow's teat, will, in a considerable number of cases, do away with the necessity of even suspending suckling for a day, much more of giving it up altogether]. (a)

Excoriations of the *prepuce* require the operation for phymosis, when they are owing to the distension and traction of the part during the erection of the penis.

Excoriations of the *anus* require the use of soothing suppositories, hip baths, and bland injections; when the affection is complicated with spasmodic stricture of the rectum, it commonly yields to gelatinous fomentations or stuping, but is cured more certainly and speedily by the double incision proposed by Boyer.

Excoriations of the legs, complicated with œdema and petechiæ, are best treated by the horizontal position of the limbs, by the pressure of a light bandage, and when the skin is very much inflamed, even by the abstraction of blood locally.

Chaps and excoriations of the toes require the feet to be frequently washed, and a piece of soft lint to be interposed twice a day, between the several digits.

The superficial excoriations to which new-born children are sub-

(a) Small benefit will be derived from topical remedies in this troublesome and often exceedingly painful affection, unless the so frequently associated febrile irritation and derangement of the digestive function be removed. This is done by purgatives, alternating with magnesia and the alkalis. Of the first, calomel, followed by castor-oil, Epsom salts, or rhubarb and magnesia, with compound powder of jalap, answers a good purpose.

When stimulating washes are indicated, I have derived most benefit, in some cases, from the solution of sub-borate of soda in water and alcohol, and in others, from the fluid chloride of soda of the shops, diluted with equal parts of water.



ject, get rapidly well by attention to cleanliness alone, by the use of baths and fomentations, and the free application of powder to the inflamed parts. [If they are obstinate, some weak metallic wash (as zinci sulph. gr. xii to aq. font. vel rosæ ʒiv) heals them immediately.]

As to those chronic erythemata that are independent of outward causes, and fiery spots of the face (*taches de feu*), they often resist every curative means attempted. They have occasionally been successfully treated by the use of baths and steaming, alternated with the local administration of sulphureous vapours; in some cases, too, the cure has appeared to be aided by the use of purgatives.

#### *Historical Notices and Cases of Erythema.*

225. Erythema has been differently and often imperfectly described in books of pathology. One of its varieties (*redness about the margin of the anus*), has been signalized as a disease peculiar to childhood; another chronic erythema has been entitled *dartre erythemoïde*, thus mixing it up with vesicular and scaly diseases; and a third, erythema *diffusum*, has been confounded with erysipelas.—Cullen erred when he asserted that erythema was always without concomitant or secondary fever. By regarding it as the lowest degree of erysipelas, Callisen shows that he was unacquainted with its principal varieties, though they are well described by Willan. Pellagra, which belongs to the order of squamous affections; and acrodynia, which, in many respects, bears a strong analogy to pellagra; burns and frost-bites, which may appear under the bullous and gangrenous forms; the hydrargyria, whose form is vesicular, have all of late, but improperly, been included among the erythemata. Cases of the principal varieties of this exanthematous eruption, may be found in various special and periodical publications.<sup>1</sup>

CASE I. *Symptomatic Erythema of the buttocks and thighs: cæco colitis.* The daughter of M. \*\*\*\*, six months old, at the beginning of Nov., 1824, presented all the symptoms of acute cæco-cæcolitis or inflammation of the mucous membrane of the cæcum and colon: she had frequent liquid, glairy, sour, and at times sanguinolent motions; pain was evidently excited by pressure along the course of the colon, which was not the case in the districts occupied by the other viscera of the abdomen; the great intestines were distended with flatus which was often expelled; there were fever and loss of appetite: the tongue was nearly natural. At the same time a number of red spots from half an inch to two inches in diameter, of an oval or irregular shape, strongly defined, but not prominent, appeared on the upper parts of the thighs, around the trochanters, and in the inguinal and ischiatic regions. The subcutaneous cellular substance did not participate in the inflammation of the skin.—The symptoms all yielded within twelve days to the application of leeches to the anus, to the use of the warm bath and of emollient cataplasms, to injections of small quantities of decoction of marsh-mallows and of poppy-heads into the rectum, and to the antiphlogistic regimen generally. A month afterwards there was a fresh attack of intestinal inflammation, and a new eruption of these erythematic spots. The same plan of treatment was followed, and with the same success. The inflammatory affection of the great intestine has since recurred at intervals remote in various degrees from each other, and has always been accompanied by symptomatic spots of erythema on the hips and thighs; but the plan of treatment indicated, has always proved adequate to put an end to the disorder; and since the month of March, 1825, the child has thriven, and has always enjoyed good health.

CASE II. *Erythema marginatum; patches scattered over the face and surface of the body: Bronchitis.*—I. Bailliot, 26 years of age, of a sanguine temperament and strongly built, entered La Charité on the 13th of Feb., 1827. This patient had been eight days previously

attacked with the eruption for which he now sought assistance. It was characterized by spots of a red colour, which disappeared on pressure, of an irregular shape, of various sizes, slightly prominent, and not itchy. A certain number of these spots were seen on the forehead and nose; the right eyelid was red and slightly œdematous, the left was only injected in a very small district. Similar patches were observed on the dorsal aspects of the forearms, where they were larger than on the face, and also behind the ears. Their surface looked as if sown over with small white elevations; but on raising the epidermis with the point of a pin, it was seen that there was no fluid effused beneath it. Some of the patches appeared to be surmounted by accidental vesicles. The patches were often confluent, others were distinct, and from three-quarters of an inch to an inch in diameter. The chin was covered with solid red lumps, with little tubercles flattened on their summits, in the intervals between which the skin had its natural appearance. Similar elevations, but of less size, occurred in different parts of the cheeks and neck; the cuticle that covered these was shining. One of the lumps of the chin was covered with a yellow crust, produced by the drying of a vesicle. The lips, of unequal redness, seemed marbled; on each conjunctiva, there was a patch of a very vivid red, towards the inner angles of the eyes, which were weeping. On the fore parts of the legs spots were also visible of a less intense degree of redness than those of the face.

This erythema first showed itself upon the neck after two days of a violent cough and sense of lassitude. On the third day the patient took to his bed, since which time he has had shivering fits every evening; these continue all night. He complains of headache; the tongue is moist, without any redness of the edges, and is covered by a yellowish fur; he suffers from eructations and constipation, having had but one motion within the last eight days; the pulse is full, a little more frequent than in the healthy state; mucous rattle at the posterior part of the left lung—(*Venesectio ad ʒxii, mucilaginous lemonade for drink, and low diet prescribed*). Feb. 15th.—The blood was found strongly buffed; the patient was sweating profusely: the spots of the eruption were prominent and less red on the face; the cuticle appeared wrinkled on the surface of those behind the ears; some of the spots on the other parts were also of a less vivid red or livid hue. A few adventitious vesicles were observed full of serum. Feb. 16th.—The spots on the legs have faded; several of those on the face are white and shining, and on the lips they are paler and more collapsed. He complains less of headache, he sleeps better, the fever is diminished, and the expectoration is easy. Lemonade was continued as drink, emollient injections were prescribed, and better diet, broth or soup several times a day was allowed. 17th.—The patches of the forearms are becoming white towards their centres, and form a sort of ring; those of the right forearm have become confluent; those of the left are a little more extended; others, as those behind the ears, and on the right upper eyelid, have disappeared, or such as still remain form little islets surrounded by the white or rose-coloured skin; a slight desquamation is taking place about the root of the nose, and behind the left ear. The spots on the legs are shrunk. He sleeps well; the respiration and expectoration are easy, and the appetite has returned. 18.—The redness of the spots declines more and more; their prominence diminishes gradually, especially in the centre; the œdema of the eyelids is no longer visible; in a word, from this time forwards, the erythematous patches everywhere disappeared, and were succeeded by a slight desquamation, so that the patient left the hospital perfectly well on the 28th, after a fortnight's confinement.

CASE III. *Several varieties of erythema in the same individual.*—M. Dalivot, 21 years of age, entered the hôpital Saint Antoine, on the 4th of May, 1830. This young man, strong and well formed by nature, had never hitherto suffered from any disease of the skin. Within the last week, however, some red patches had appeared on the face, attended with itching which prevented him from sleeping. The digestive functions having been out of order, leeches had been applied to the epigastrium. On the 5th of May, the face, the upper and fore parts of the chest, and the legs presented an eruption of spots of a livid red colour, raised above the level of the skin, irregularly circumscribed, and not disappearing completely under the pressure of the finger. Some of these were as large as a sixpence, and rounded

<sup>1</sup> Schenck. Obs. med. rarior. in-fol. 1644, p. 295 (Eryth. of the mammae).—Willan. Reports of the public Dispensary.—Edinburgh Med. and Surg. Journ., Jan. 1811 (three cases of eryth. tuberculosum).—Journ. des hôpitaux, in-fol., année 2, p. 10 (Eryth. of the lips).—Journ. hebdomad., t. iv. p. 72 (Eryth. circinnatis).—Bulletin des sciences med. de Ferussac, t. xiii. p. 232 (intertrigo scrotalis).—Lond. Med. Gaz., t. xi. p. 37-415 (Irritative eryth.).—Lond. Med. Gaz., t. i. p. 587 (*Sore navel. Sore ears.* W. Hunter).—Lond. Med. Gaz., t. v. p. 655 (Eruptive rheumatic fever. Cock).—Alibert. Précis sur les maladies de la peau, t. i. p. 273 (Dartre erythemoïde).



in figure; others, the size of the hand, appeared slightly corrugated on their surface. Their circumference was shining and transparent as if fluid had been effused under the epidermis; but when this was pricked, nothing followed but a little blood; on the legs the spots were oval-shaped, deep-seated, as it were knotted, and of a violent tint. On the backs of both hands, and the dorsal aspect of both forearms the spots were papular, and of the size of small lentils. On the head, and amongst the hair, small elevations were felt. The patches were the seat of rather violent itching. The patient complained of headache, the eyes were somewhat bloodshot, the pulse was full and hard, the tongue white. The right side of the chest was less resonant than the left. No mention was made of pain in the epigastric region. He was bled to  $\frac{5}{2}$ ii, and put upon lemonade as a diluent. The 8th of May: the red patches are shrunk, their surface shows slight furfuræ, and their circumference no longer appears shining; the redness now disappears on pressure, and instead of hard risings along the legs, a number of brownish and yellowish marks alone remain. The patient left the hospital some days afterwards quite well.

CASE IV. *Papular and tubercular Erythema; Bronchitis; Rheumatism; eruptive rheumatic Fever.*—Marie Michaud, 22 years of age, a servant girl, of a soft and lymphatic constitution, has been unwell, during the last four months she has lived in Paris. Some days after coming into the hospital she observed red patches on different parts of her person; they are now distinct on both elbows and on the arms, and are of various sizes, from that of a sixpence to that of the palm of the hand. These patches are prominent, painful, and disappear under pressure, to reappear from their circumference towards their centre as soon as it is removed; their colour, generally red, is in some of a livid cast. The elbow joint appears swollen; motion there is difficult, and it is very painful to the touch. The appetite is gone, the breath disagreeable, the pulse frequent; sweating, no cough, the menses flowing. On the 1st of March, 1830, both elbows and both knees are swelled and painful; the former is half bent and cannot be straightened. The patient also suffers pain in the wrist, and a little in the fingers, which, however, she cannot move without the greatest suffering. The red patches observed last evening are in the same state; others of a smaller size—from that of a lentil to that of a six-penny-piece—have appeared on the thighs. They are projecting, smooth, and painful to the touch. The pulse is frequent and full; anorexia. (Two bleedings of  $\frac{5}{2}$ ii, each were practiced within the twenty-four hours. Mucilaginous drink.) 6th.—The wrists only are now painful; the red patches of the elbows have gone; several livid and bluish patches are disseminated over the limbs: cough; hissing and mucous rattle. The rheumatic pains continue; on the elbows and wrists the patches have a marbled appearance; the tongue is yellow, foul, and thickly coated; there has been vomiting; no passage of the bowels; pains in the belly; insomnia (thirty leeches to the epigastrium, two emollient injections, low diet). 8th.—Bluish marks replace the red patches; the left knee is painful, the wrists and elbows but slightly so (thirty leeches to the knee, a bath). 9th and 10th.—The patient still suffers in the knees and wrists, which are a little swollen; pains of the epigastrium and abdomen; tongue still coated and yellow (broth allowed, and the bath repeated). 11th.—The right knee is less painful; the appetite has returned (same diet). 17th.—The patient suffers less. (The baths are continued; better food.) 22d.—Convalescent. The patient discharged well on the 3d of April.

CASE V. *Papular, confluent and hemorrhagic Erythema.*—Bridoux, a shoemaker, 23 years of age, entered La Charité on the 1st of June, 1831. From a very early age he had been accustomed to be purged every spring; a measure which he had neglected this season. For several months he had been working very hard, rising at four o'clock in the morning, and going to bed at midnight; he had also been living worse than usual. His temperament might be characterized as lymphatic.

On the 31st of May, he had been in a violent passion; towards the evening of the same day, he felt his face puffed and hot, and a sense of itching in different parts of his body. Soon after, red patches appeared on the arms, the breast, the back, the belly, and lower limbs; these patches rose above the level of the skin; of small extent at first, they spread rapidly and became confluent in many districts. There was neither pain of the throat nor of the eyes: the night was disturbed.

June 1st.—The patient exposed himself to a current of cold air. At night the face was somewhat puffed, and of a general pale-reddish colour; all the rest of the surface of the body, especially the posterior region of the trunk, presented patches of greater or smaller magnitude, generally irregular in shape, evidently prominent to the eye, as well as sensibly so to the touch. The redness disappears on pressure and reappears again immediately. The patches are completely indolent. Since the morning he has had slight cough and soreness of throat; the tongue is moist and rather clean, the respiration is natural, pulse 96, (tisan with mucilage and honey, syrup of diacodium half an ounce). June 2d.—The night tranquil, sleep only interrupted by the cough. The patches on the whole of the posterior region of the trunk are shriveled, and their former vivid red colour is replaced by a pale violet tint. On various points corresponding to the primary patches, and on the spaces that separated them, spots, evidently hemorrhagic, and similar to those of purpura, have appeared; these neither disappear nor diminish in intensity by pressure. On the belly and limbs, the red colour and prominence of the patches observed the preceding evening remain. Pulse 108 and rather hard—(bleeding to  $\frac{5}{2}$ ii, mucilaginous lemonade, low diet.) By seven o'clock in the evening of the same day, the patches of the trunk are shrunk; a violet hue has succeeded the bright red that characterized them in the morning. On the legs and thighs, the patches still preserve their prominence and their red colour, though in a less degree. The heat of surface has increased; it is particularly great on the back, where a portion of the skin that has hitherto remained white has acquired a livid hue, which disappears under the pressure of the finger. On other regions, large patches of a violet colour are observed, which do not vanish under pressure. The blood drawn is not buffy; no cough; pulse from 86 to 100; the patient can close his hands, which he could not do last evening on account of the swelling and stiffness of the fingers. June 3d.—Ecchymoses are seen stretching in lines or in irregular patches upon the shoulders and loins. The general livid colour of the integuments of the back disappears on pressure. On this ground, isolated maculæ appear scattered here and there, having the colour of ecchymoses. The sanguineous suffusion is especially conspicuous on the back: the maculæ, very closely set and large, are most numerous on the thighs, the loins, the flanks and belly; the arms are freer. These stains disappear completely under the pressure of the finger. June 4.—A pale yellow colour begins to be visible amidst the general livid hue of the back. Several of the confluent stains, too, present an appearance of commencing absorption towards their centre, the yellow tint of which parts is in strong contrast with the purple of their circumference. The countenance is natural; the appetite has returned. June 5 and 6.—The livid colour continues to yield to the yellow, and by the 7th the skin, except on the thighs, had regained its natural appearance; better food was now allowed, and on the 9th the patient left the hospital cured.

CASE VI. *Œdema of the legs; petechiæ; chaps.*—Fr. Martin, 63 years of age, and labouring under these symptoms, was received into La Pitié on the 5th of August, 1826. In the course of the year 1822, after undergoing great fatigue, he had been affected in a similar way, and been cured by simple lotions with cold water. He had, however, for 15 months afterwards, suffered with chapped hands. Employed for the last 14 days in a species of work that fatigued him greatly, his legs became œdematous, so as to pit under the finger; red patches, which disappeared on pressure, at the same time appeared on the insides of the legs; besides these patches, which now form groups in different places, a great number of petechiæ, disposed in clusters or running in longitudinal or circular lines, are visible, principally on the fore parts of the legs; the cuticle seems raised over some of these petechiæ; in some places the blood has even traversed the skin, and the tops of the petechiæ are then covered with a small drop of dried blood. The skin of the legs is farther divided by numbers of irregular and mostly transverse chaps or cracks, half a line in breadth and several lines in length; some of these are deep, and a yellow transparent viscid fluid is poured out between their edges, which forms linear concretions along the legs; the feet are œdematous, but not otherwise affected.

Whilst under treatment, 60 leeches were applied to the legs, which were covered in the intervals with emollient poultices. The œdema,



petechiæ, and chaps amended gradually, and the patient quitted the hospital on the 15th of August, 1826.

CASE VII. *Chronic Erythema of the nose and of the malar regions preceded by habitual Epistaxis, and by Erysipelas of the face.*—Baptiste, 30 years of age, had suffered repeated attacks of crsipelas and boils, and had had itch, besides two gonorrhœas, which lasted six months each, between 1800 and 1818. He has also been subject, from his infancy till two years and a half ago, to bleeding from the nose, so incessant that he never in all that time sent an handkerchief to be washed that was not stained with blood. He then became affected with deafness, which lasted two months and got well without any treatment. It was now for the first time that he perceived some red spots upon the nose and cheeks, which have since slowly increased in size. On the 20th of May, 1828, I noted three of these vulgarly styled *fiery spots* (*taches de feu*) on different parts of the face, two on the cheeks, the third on the base of the nose. These spots, of a deep-red colour and well defined, are not hot, except when the blood mounts to the head; he does not complain of their itching at present, and when he has, he has only passed his hand over without scratching them. By compressing the skin of the nose between the fingers, a few serous points are forced out apparently from the follicles. The skin has never been greasy, neither has there been any transudation of red fluid, as in eczema rubrum, nor any appearance of pustules, as in rosacea, nor of papulæ, as in lichen. Before consulting me, the patient had made use of several ointments of the composition of which he is ignorant. (*Ordered to be bled, whey for drink, lotions with almond emulsion, milk diet.*) After the bleeding, which was copious, the red colour of the skin disappeared for a while, but soon returned. I ordered six leeches to be applied thrice within the nostrils, after the application of which, the patient complained of greater heat in the cheeks. For the last two months he has had a blister on the arm, which does not appear to have had any influence on the progress of the exanthematous affection. Purgatives and sulphureous lotions had the effect of causing a notable diminution in the eruption; to such an extent, indeed, that the patient, despairing of a radical cure, gave up paying farther particular attention to his complaint.

CASE VIII. *Chronic erythema of the hand and forearm.*<sup>1</sup>—M. F\*\*\*\*, nearly 46 years of age, of a very hasty temper, and habitually given to disputation, after several days of unremitting exertion, perceived a sudden eruption of rather large patches, of a bright-red colour, which, however, uniting together, soon assumed a livid appearance, upon the back of the left hand and forearm of the same side. As he was subject to an eruption of this kind, which showed itself on different places, he betook himself to the use of diluents, baths, fomentations, strict regimen, &c., and abandoned his labours,—a very rational plan of treatment, which he was accustomed to pursue with success in former instances. But after the lapse of three weeks, the disease, which used to disappear at the end of 12 or 14 days, had attained a great degree of severity, and I was consulted. The eruption now extended from near the elbow to the first phalanges of the fingers; it was slightly elevated, and almost of the colour of wine-lees, accompanied with much itching, which the patient had great difficulty to prevent himself from trying to appease by scratching; the surface was rough, soft, and presented several islets of healthy skin. I ordered the application of a number of leeches around the disease, and to the points in the midst of it that were unaffected, a practice that was followed by very little relief. I directed two vapour baths, to be followed by the local administration of the hydro-sulphurated vapour. The appearance of the eruption was by this means quickly changed, and by persevering in the treatment of ten days, the disease was subsided entirely.

ERYSIPELAS.

Vocab. *Erysipelas, Ignis sacer, Rosa volatica, Rose, St. Anthony's Fire.*

226. Erysipelas is a spreading non-contagious, exanthematic inflammation, characterized by a red colour of the skin, with swelling

of the subcutaneous cellular tissue, commonly ending in resolution and desquamation, sometimes in suppuration, seldom in gangrene.

227. *Causes.*—Erysipelas may be developed under the influence of appreciable causes, such as filthiness, rude and repeated frictions, exposure to violent heat, the contact of poisonous plants, of certain insects, or of the juices or fluids excreted from their bodies; the application of topical irritants, pricking with instruments impregnated with animal fluids in a state of corruption, and external injuries generally,—a contused wound, a surgical operation, the vaccine and variolous inoculation, &c. Among other well-authenticated causes of the disease, we must also include certain influences engendered by the nervous system under paroxysms of passion, profound grief, &c. As to bad and corrupted food, high seasoning, the abuse of spirituous liquors, and indulgence in the pleasures of the table, these may certainly give cause for the development of erysipelas, but there is nothing to prove that they occasion this more frequently than any other disease. The etiology, however, of a vast number of cases of erysipelas, is involved in the greatest obscurity. It is known that the appearance of the disease coincides with a buffy state of the blood, analogous to that observed in acute rheumatism; and it is not less certain that diffused and flitting erysipelas, coming on in patients worn out by some chronic inflammation, is the precursor of approaching dissolution; the observer confirms these facts every day without being able to ascertain their causes. Other circumstances, again, do not admit of so rigorous a construction. "There are seasons," Mr. Calmeil writes to me in 1828, "when erysipelas spreads universally among the insane, and causes a suspension of the revulsive measures which form, as it were, the bases of our treatment in cases of mental alienation. The application of a seton, or a moxa, or a blister, is then followed by erysipelatous inflammation; a superficial wound of the skin has the same consequences; the slightest stroke, the opening of a vein, the application of a leech, all are followed by erysipelas. The present year (1828) has been particularly remarkable in this respect; during the last six months, the infirmaries have been filled with the insane labouring under erysipelas. The disease begins on any part of the body, sometimes on a healthy part of the skin, but most frequently in the vicinity of an issue. After four or five days of treatment, it extends to the surrounding parts, and in the space of 20, 30, 40, or 50 days, it has spread over the whole, or nearly the whole, of the surface of the body. Treatment by compression did no good; the bites of leeches became new centres for the disease; many patients were reduced to extremity and several died. In preceding years, I have seen a similar epidemic constitution prevailing in the asylum at Charenton, but never to the same extent as at present." Facts of the same description have been observed at the Bicetre, Salpêtrière, Saint Louis, La Charité, [and in almost all other great hospitals,] at certain times, and during certain periods, when the disease of erysipelas occurs so frequently as to assume the character of an epidemic.

It has been said that erysipelas was capable of being transmitted from one individual to another by contagion. This opinion, lately revived by Weatherhead and by Dr. Wells, and which a case observed by Costallat seems to countenance, has arisen, perhaps, from two or more individuals exposed to the same influences, having been successively or simultaneously attacked by the disease. Erysipelas is more frequent during the spring-time and autumn than at any other season. It sometimes recurs in the same individuals at determinate intervals, variously remote from each other; some have one or two attacks every year, just as others suffer from eczema and lichen. In amenorrhœa, erysipelas sometimes appears periodically at the times when the menses ought to flow; men are less subject to such attacks and relapses than women. The disease, arising from external causes, attacks, in preference, persons of a fine and delicate skin.

228. *Symptoms.*—When erysipelas is the effect of causes that have not acted directly on the skin, certain morbid phenomena common to a great number of acute diseases, are almost constantly observed before the attack; such as headache, pain in the epigastric region, nausea, bitter taste of the mouth, constipation, slight shivering fits, hardness and increased frequency of the pulse, &c.—the *erysipelatous fever* of Hoffman.

1. Towards the second or third day of this febrile state, *simple erysipelas* is proclaimed by the following symptoms (*initium*): slight and

<sup>1</sup> Rapou. *Traité de la methode fumigatoire*, t. ii. p. 27.



irregularly circumscribed tumefaction in some part of the integuments, very frequently of the face; redness of the skin, with a tinge of yellow, and sometimes of blue, disappearing on pressure, reappearing immediately the finger is removed, sharp and pricking pains in the part affected, accompanied by smarting, and a sensation of dry and burning heat. These symptoms and the febrile condition increase in severity to the third or fourth day (*augmentum*), and continue for about the same period with the same degree of intensity (*status*). The inflamed skin sometimes becomes covered with vesicles analogous to those of *eczema* or *miliaria* (*erysipelas miliaris*). Sometimes, also, bullæ or blebs appear on different parts of the inflamed surface (*erysipelas phlyctenodes*). These blebs, isolated or confluent and similar to the blisters produced by a scald, break on the very day of their appearance, and most commonly towards the fifth or sixth day of the disease; the fluid they contain dries and forms hard yellowish crusts which subsequently become brown or black, and are a line, or even several lines, in thickness.

The most favourable termination of erysipelas is in resolution; an event which is indicated by the symptoms, after having continued for three or four days in all their intensity, beginning to subside (*decrementum*); and the certainty of the issue is known by the gradual disappearance of the redness, the pain, the heat and the tumefaction. The cuticle then falls off in scales, the crusts are detached, and there is soon nothing remaining but a slight pastiness, which is not long of going also. The process of desquamation is more or less apparent according to the nature of the parts attacked with erysipelas, and its intensity. Mr. Wilson was accustomed to exhibit every season for several successive years, a patient to his pupils who was subject to annual attacks of erysipelas, at the end of which, the cuticle of the hands was entirely detached in the form of a glove, and that of the feet, like a bag. A case of the same kind is recorded in the sixth volume of the *Philosophical Transactions*.<sup>1</sup>

Of all the forms of inflammation to which the integuments are subject erysipelas is that which has the greatest disposition to vanish suddenly, an event that is often followed by its appearance in some other part of the body (*erysipelas erratica, vel ambulans*), or the development of inflammation in some more important organ (*erysipelas metastatica*). Thus it has been seen extending successively from the hairy scalp, the forehead and the face, to the neck, and then to the shoulders, whilst the face and scalp were freed from it; or otherwise, appearing momentarily on the face, and, vanishing thence, replaced by a mortal affection of the brain or its membranes.

Fever, heat of surface, sleeplessness, and gastric disturbance commonly attend in the train of erysipelas; more intense as the inflammation advances, the symptoms decline in the same proportion as the inflammation subsides towards the seventh or eighth day of the disease. The termination at this period is sometimes announced by a sediment in the urine, by the bowels becoming open, or by the occurrence of some slight hemorrhage.

2. *Phlegmonous erysipelas*, as its name implies, partakes of the nature of phlegmon and of erysipelas at the same time; the skin and the subcutaneous cellular substance may be alone affected, or the inflammation may reach the sub-aponeurotic cellular tissue, cause the most alarming symptoms, and bring the life of the patient into jeopardy, if he be not promptly and effectually aided. The various shades of this species of erysipelas may be arranged under three different degrees according to the intensity of the morbid phenomena. 1st degree.—At the outset, anxiety, followed by smarting and redness in the part about to be affected with inflammation; anon a sense of burning in the inflamed part, a bright red colour of the skin, diminishing insensibly round the circumference of the seat of disease, and disappearing for an instant on pressure being made with the finger, after which the point compressed regains more slowly than in simple erysipelas both its morbid colour and its former level. The portion of integuments affected, raised by the swelling of the subcutaneous cellular tissue, forms a large tumour, hard, and penetrating deeply; the pain becomes pungent, the heat burning, the lymphatic glands inflamed, and a considerable degree of fever is present. If, towards the fifth or sixth day, the skin is observed to become less red, less tense, to be covered

with branny scales, and the subcutaneous cellular tissue to resume its original volume, the phlegmonous erysipelas will end in resolution, or in effusion, the fluid of which will be absorbed after a few days. If, on the contrary, the pain becomes pulsative, symptoms of suppuration will not be long of showing themselves. The abscesses that follow, opened naturally or by an incision, are found filled with laudable pus and soon heal up. 2d degree.—The phlegmonous erysipelas is of larger extent; the degree of redness, of heat, of suffering, and of fever all greater in amount. Between the sixth and the ninth day, if the inflammation is left to itself, purulent deposits are formed here and there under the skin, and even in the spaces between the muscles: when these are opened, sphacelated shreds of cellular membrane are discharged along with a quantity of pus; sinuses and fistulous passages are formed and pour out an ichorous and fetid matter. Occasionally, the skin, detached from the parts beneath and very thin, becomes grayish in colour, and folds in upon the edges of the ulcerous cavities. The mucous membrane of the stomach and intestines inflames, and the patient often sinks exhausted by fever, diarrhœa, and the copious discharge that takes place from the subcutaneous cellular membrane. 3d degree.—The symptoms in this last degree are even more violent from the outset. Within the space of two or three days, the erysipelas attains its greatest intensity; the skin, smooth, tense, and shining, is of a bright red colour, and scarcely preserves for an instant the impression of the finger. The distress of the patient increases: his pulse is hard and frequent; he suffers great pain; tossing about in his bed, he gets no sleep, becomes delirious, and is parched with thirst; all these symptoms are even aggravated towards evening. About the fifth or sixth day, the inflamed skin loses its sensibility, puts on a livid hue, becomes softened and covered with phlyctenæ filled with reddish or blackish serum. Ecchymoses and eschars form (*gangrenous erysipelas*), at the same time that several abscesses are produced. Under the most favourable circumstances, these sphacelated parts are thrown off and the sores slowly heal; but in the great majority of instances, the patient sinks from the absorption of pus into the system, from serious affections of the stomach, of the bowels, of the brain, announced by the following symptoms: tongue covered with a yellow, greenish, brownish, or even black coating, moist at first, then dry; sordes about the teeth and gums; fetid breath; vomiting of bilious stuff; diarrhœa; involuntary passage of the urine and feces, which are black and offensive; pulse hard and frequent; slow and tardy replies to questions, vertigo, rambling, low delirium, subsultus tendinum and death.

3. Nothing is more common than to see œdema of the subcutaneous cellular tissue supervene on the last stage of simple erysipelas, or on the first period of phlegmonous erysipelas: it is even a constant occurrence in erysipelas of the eyelids and scrotum; but the title of *œdematous erysipelas* has been given more especially to that variety of the disease in which the swelling formed by the skin and subcutaneous cellular tissue is developed in a slow and gradual manner, and offers the resistance of œdema and of emphysema, instead of the tension of phlegmonous erysipelas. The skin, smooth and glistening, pressed on by the finger, retains the pit for a long time. It is uncommon to see any accidental blebs on the skin in this variety, and when they do occur, they are smaller and less elevated than in simple or phlegmonous erysipelas. They appear between the third and the fifth day, reckoning from the period of formation of the swelling, and, bursting, are succeeded by crusts of little extent or thickness.

The genital parts in the female, the scrotum in the male, the legs and swollen limbs of dropsical subjects, are the most common seats of œdematous erysipelas, which frequently occurs after the punctures made in the skin and loaded cellular membrane with a view to draw off water.

Of all the modes in which this affection terminates, gangrene, it may be conceived, is the most deplorable. This is indicated by violent pain, a red colour and shining appearance of the skin, which by and by becomes livid or leaden in its aspect.

229. The organization, or intimate structure of the skin and subcutaneous cellular membrane, modified in different regions of the body, renders these more or less liable to be affected by one or another of these varieties of erysipelas.

1. *Erysipelas of the face* is unquestionably the most frequent of all.

<sup>1</sup> Chevalier. Lect. on the General Struct. of the Hum. Body, p. 122.



It begins in the nose, the cheeks, the eyelids, or the lips, and extends with greater or less rapidity to the half and more commonly to the whole of the countenance. The lax tissue of the eyelids is swollen and œdematous; the eyes are closed and watery, the nose is enlarged, the nostrils are dry, the lips puffy, the ears red and shining; a copious secretion of saliva fills the mouth, which is opened with difficulty; sometimes the inflammation even extends to the nasal fossæ, the pharynx, and cavity of the tympanum; often, whilst the epidermis is detached in bran-like scales in some places, the phlogosis continues or appears in several others, especially on the nose, on the forehead and hairy scalp. Of all the varieties of erysipelas, that of the face is most subject to recede or disappear suddenly. This disagreeable termination is most commonly preceded or followed by affections of the brain or its membranes, announced by delirium, profound or lethargic sleep, subsultus tendinum, &c. In some cases the disappearance of the erysipelas has seemed to me to be subsequent to the affection of the brain. The most usual termination of erysipelas of the face is in resolution; it may be so ended on the one side, and on the other be terminated by the establishment of several suppurating points. Leveillé has seen erysipelas of the face complicated with pseudo-membranous inflammation of the larynx and trachea, the existence of which was not suspected till after death. Coryza, ophthalmia, external otitis and bronchitis are the most common complications of this variety.

2. *Erysipelas of the hairy scalp* has almost always the characters of phlegmonous erysipelas. Punctures and contusions, simple or complicated with wounds (*traumatic erysipelas*), and the incisions from operations performed on the scalp, are the most frequent causes of the disease. It usually first appears in the vicinity of the parts irritated, and sometimes on the opposite side, from the sixth to the tenth day after the solution of continuity in the integuments. At the beginning the pain of the head is dull rather than acute; the integuments are affected by an œdematous infiltration, and are soft and doughy. The skin, of a pale red colour, as if whitened over, pits under the pressure of the finger, preserves the print for a long time, and only very slowly regains its colour and former level. The slightest touch renews or increases the pain, which is always accompanied by febrile symptoms; the tension of the integuments of the occiput, and the swelling of the external ears, often make lying on the back or side almost impossible. If this disease be left to itself, shivering fits at irregular intervals supervene, and the patient falls into a state of coma. The inflamed skin becomes thin in parts, bursts, and gives vent to a quantity of pus and of shreds of cellular membrane, and of the occipito-frontal aponeurosis, become gangrenous. The scalp is almost never stricken with gangrene; being, according to the judicious remark of M. Dupuytren, furnished with blood-vessels which are independent of those that are distributed to the pericranial cellular substance. On the following days new openings are formed in the most depending parts near the centre of the erysipelas, and additional shreds of cellular membrane and of aponeurosis are detached; the discharge is abundant and offensive, the bones of the cranium are sometimes exposed, and if the disease be not checked in its progress, delirium, diarrhœa, and various other serious symptoms give warning of the approach of death.

3. *Erysipelas of the mamma* in women often presents all the characters of the phlegmonous form of the disease in the highest degree. The exposure of these organs to cold soon after delivery, the irritation arising from the sucking of the child, the first time of nursing, [and the excessive distension of the mammæ with milk, which is too often allowed to occur,] are the most frequent causes of the affection. It almost always ends in suppuration, and is usually accompanied by inflammation of the axillary glands.

4. *Erysipelas of the umbilical region* is principally observed among the new-born infants in foundling hospitals, lying-in hospitals, and similar institutions; it sometimes extends to the hypogastric region and to the genital organs. Gangrene is one of the common terminations of this affection, which, left to itself, is often fatal. Its occurrence is often ascribable to violence done to the umbilical cord, to bad food, and to the insalubrity of many of the establishments where the newly-born are collected. It is frequently complicated with peritoneal inflammation, and with umbilical phlebitis.

5. *Erysipelas of the groin* is occasionally symptomatic of the infiltra-

tion of fecal matters consequent on a perforation of the intestine towards the crural arch or inguinal canal. In this case the cellular tissue is crepitating and emphysematous.

6. *Erysipelas of the scrotum and of the prepuce* often ends in gangrene in elderly persons. The œdematous swelling of the prepuce is sometimes so great that the patient cannot void his urine; the scrotum, twice or three times its natural size, usually sphacelates at the points where it is in contact with the bed.

7. *Erysipelas of the limbs* is most usually confined to the forearm or to the leg. When it is set up in the neighbourhood of the articulations it is occasionally accompanied by inflammation of the synovial membranes. If the inflammation has extended deeply to the subcutaneous cellular tissue, the dimensions of the parts may be singularly changed: I have seen the arm acquire nearly the size of the thigh. The limbs are the most frequent seat of phlegmonous erysipelas: rest and proper position are two conditions indispensable to the obtainment of a speedy cure.

8. M. Renauldin gives a case of *general erysipelas* occurring in the person of a woman about fifty years of age. The whole skin of the trunk and of the limbs, slightly swollen, presented a very intense erysipelatous red blush; the face was the part least affected; the patient, who felt as if consumed by fire, was soon restored by the use of aperients, and tepid baths frequently repeated.

230. *Anatomical Observations.*—The most simple erysipelas attacks not only the vascular rete of the skin, but extends to the entire thickness of this membrane and to the cellular tissue lying beneath it.—*Phlegmonous erysipelas* does not differ in reality from *simple erysipelas*, save by the higher degree of inflammation that attends it. According to M. Ribes, in erysipelas the small veins of the integuments are the vessels principally affected, the ramuli of the arteries being less inflamed; the lymphatics appear to be implicated in a less degree than either the veins or arteries. The inflammatory blush is peculiarly remarkable on the internal coat of those small veins, the canals of which are filled with pus. On the termination of erysipelas in gangrene, the walls of these vessels are black, and tear with the greatest ease.

In my opinion, this condition of the arteries and veins is by no means constant; I have not found the slightest trace of inflammation of these small vessels in several cases of erysipelas I have examined. Besides, these remarks of M. Ribes could only apply to the subcutaneous veins; the vessels of the rete, and of the papillæ of the skin, are all too minute to permit of any demonstration of their inflamed state being made. But an alteration of the subcutaneous veins themselves is not a constant condition, and they may contain pus which has been absorbed. This was actually the case in one patient, the history of whose disease I shall detail particularly by and by. The skin of the face was pale everywhere, except on the eyelids, which preserved a slight degree of redness in the parts that had not been covered by phlyctenæ. The subcutaneous and intermuscular cellular tissue of the face was infiltrated by a yellowish sero-purulent fluid; small abscesses, containing laudable pus, existed in front of, and behind, the orbiculares palpebrarum muscles, among the cellular tissue of the orbit, and extended towards the temporal fossæ; the cellular substance of the scalp itself was also infiltrated. The parietes of the veins of the face and neck, although lying bathed in pus, showed no trace of inflammation. Many of these minute vessels contained purulent serum similar to that effused into the inflamed cellular membrane. The minute arteries were healthy. I have also found pus in the lymphatic vessels of a lower limb attacked with phlegmonous erysipelas, without any visible alteration of the parietes of the blood-vessels. In fine, I have met with true inflammation of the principal veins in limbs that were the seat of phlegmonous erysipelas or of simple phlegmon, and as a consequence of paronychia or of amputation. If I may be allowed to draw a conclusion from my own experience, I should say, that phlebitis complicates inflammation of the cellular tissue more frequently than that of the skin.

In phlegmonous and gangrenous erysipelas the morbid conditions of the skin and cellular substance are carried to a higher pitch; the pus is collected within one or more abscesses, or infiltrates the cellular membrane, which, in other places, appears loaded with sero-sanguinolent fluid. The skin, the subcutaneous cellular tissue, the



aponeuroses, the periosteum and the superficial bones themselves may perish. The bodies of those who sink under these diseases present several alterations that belong to pulmonary, cerebral, and gastrointestinal inflammations, such as small collections of pus in the lungs, in the liver, &c. Dr. Davy observed that the blood in erysipelas coagulated as speedily as in health, and that nevertheless it most commonly presented the buffy coat.

231. *Diagnosis.* The inflammation in measles is too general and too superficial to be confounded with erysipelas, moreover it is dotted, or disposed in small wavy or curved lines. Scarlatina, even when the eruption does not cover the whole of the body, differs from erysipelas in being contagious, and almost invariably preceded and accompanied by considerable soreness of throat; the strawberry red colour of scarlatina is, farther, very different from the deep red hue of erysipelas. In erythema, the inflammation often disposed in spots, is always more superficial and less extensive than in erysipelas, which, on the contrary, is spread over a large surface, often covered with phlyctenæ or vesicles, and always attended by the tumefaction of the subcutaneous cellular membrane. Numerous characters distinguish erysipelas from bullous diseases, particularly from pemphigus. It is, in conclusion, impossible to confound this exanthematous disease with phlegmon, furuncle, or anthrax; a position, which the descriptions of each of these complaints, if consulted, will make abundantly evident.

232. *Prognosis.* Simple erysipelas, without all complication, is a disease of little consequence, especially if the skin be inflamed over but a small extent of its surface. When the inflammation of the integuments has come on under the influence of causes that have acted primarily on the nervous system, or on the organs of digestion, or when (and this is the most common case) the cause is altogether unknown, the prognosis is less favourable. Phlegmonous and deep and extensive erysipelatous inflammations of the limbs are dangerous diseases; diffuse and wandering erysipelas, developed in the course of chronic disease of a febrile nature, is a symptom of the worst augury; phlegmonous erysipelas complicated with phlebitis or with the absorption into the circulation of purulent matter is almost always fatal.

On the other hand, peripneumonia, rheumatism and gout, have occasionally been seen replaced by an erysipelatous attack occurring shortly after their invasion. But it is in chronic inflammations of the skin that the appearance of an erysipelas has sometimes proved more especially advantageous.

The sudden and spontaneous disappearance of erysipelas is always an event of the most untoward kind; it is very frequently caused by the accidental evolution or progress of another disease more or less dangerous in its character.

233. *Treatment.* When slight erysipelas has been produced in a healthy individual by some evident cause, rest, the horizontal posture, especially if the disease have appeared in the lower limbs, lotions with tepid or cold water, or with any mucilaginous decoction, or gently anointing the part with lard, together with mild diluents internally, commonly suffice to put an end to the complaint, which, indeed, gets well almost as certainly if left to itself.

If the erysipelas is more intense and of greater extent, and if to the local inflammation there is superadded a burning and general heat of surface, dryness of the mouth and tongue, frequency, hardness and bounding of the pulse, &c., or if a plethoric state of the system at large exists, and seems an obstacle to the evolution and regular course of the disease, it is proper immediately to open a vein, and boldly to bathe the affected parts with cold mucilaginous lotions; in the course of the same day, or on the morrow, a local bleeding practiced at a certain distance from the limits of the inflammation, secures the good effects of the general depletion. These local bleedings ought to be repeated on the following days, if the blood have been very buffy, and if, when the disease is fully formed, the accompanying fever continue with the same degree of intensity as on the first appearance of the eruption. Whenever the erysipelas is complicated with phlebitis, the practice ought to be even more energetic.

It will be needless to recur to very active measures if the fever has declined either after the appearance of the eruption, or after the first bleeding, or in consequence of the disease, in its natural course, arriving at the period of decline. In the aged and cachectic, in

gangrenous erysipelas, or after the absorption of pus is deemed to have occurred, bleeding does mischief and ought to be shunned. If simple erysipelas has been preceded by symptoms of irritation in the stomach and bowels, it is well to apply leeches once or twice to the abdomen. Whenever the constitution of the patient has warranted the practice, or when the severity of the symptoms has required it, blood-letting has always appeared to me the surest means of combating erysipelatous inflammation occurring after one or several days of fever, and without any evident or appreciable cause—(*erysipelatous fever*). In erysipelas of the face, after the employment of blood-letting, the mustard foot-bath, blisters to the legs, and purgative glysters have often appeared to me useful and even necessary auxiliaries, and always to be recommended when there were threatenings of cerebral mischief.

The importance of blood-letting, then, in the treatment of simple erysipelas, extending to a large surface, or complicated with other diseases of greater or less gravity, is to me a demonstrated truth; but to be really serviceable, the quantity of blood withdrawn must be considerable, and must be taken away at the beginning of the disease, the symptoms of which it often moderates, without, however, cutting them short. When practised timidly, or too late in the disease, venesection neither prevents the ulterior progress of the inflammation of the skin and subjacent cellular membrane, nor the sympathetic mischief of greater or less amount that generally attends it.

When the digestive apparatus is free from inflammatory symptoms, which is by no means uncommon, another plan of treatment may be adopted; this consists in the administration of emetic doses of tartarized antimony. I have seen this mode succeed, whether the patients got rid or not of a considerable quantity of bile. Nevertheless, after a number of comparative experiments, I remain convinced that blood-letting is generally the most advantageous method of treatment, and that it is applicable in an infinitely greater number of cases than the tartar emetic plan. The often renewed idea that *emetics* in certain medical constitutions constantly cure erysipelas, then unsuccessfully attacked by other means, must by no means be received as a demonstrated truth. During one period (January, 1833), when this assertion as to the necessity of having recourse to tartar of antimony and ipecacuanha was reproduced at the royal Academy of Paris, several patients did very well in La Charité under the influence of the *expectant system*, after one or two venesections. Emetics, however, it may be conceived, are always necessary when erysipelas appears to be owing to the ingestion or to the presence of any acrid or poisonous substance in the stomach. Emetics and purgatives, so generally useful to the scrofulous, have been administered with advantage in erysipelas of the face, either as depletive agents or as derivatives; after a bleeding or two, combined with the foot-bath and purgative injections, they are often employed with greater success than when given alone. (a)

As to the *system of expectation*, it may be ventured on in cases of simple erysipelas, or of erysipelatous fever of little intensity; the cure is accomplished by the powers of nature; at one time, without any other phenomena than those that belong to the resolution of the inflammation, at another, after some form of *crisis*. In the *epidemic constitution* of 1721, during which erysipelas was very common at Turin, C. Richa informs us that the disease was often ended by slight diarrhœa, and occasionally by epistaxis. I have never observed such crises in my own practice; perhaps it is that I have not been careful enough in looking for them, or that I have interfered with their occurrence by my treatment.

Too unlimitedly adopted, the expectant method would certainly lead to the detraction of blood being delayed so long as to make it either less serviceable or altogether inadmissible; this is a difficulty which those practitioners who have assimilated erysipelas with the eruptive fevers, have not always succeeded in avoiding.

Frictions with mercurial ointment, and with lard or butter, though they seem occasionally beneficial in simple erysipelas, have, notwithstanding, no influence in preventing the phlegmonous form of the dis-

(a) In continuation of this antiphlogistic and revulsive treatment, colchicum, digitalis and antimony, with salines, may be advantageously had recourse to.



ease from generally running into suppuration. In cases of erysipelas of the face, I have often caused one side to be rubbed over with lard and the other with mercurial ointment; several times, too, one of these unguents was applied to one side of the face, whilst the disease was abandoned entirely to itself on the other; and I never perceived that the course of the disease was influenced by any of these proceedings. Such topical medicamentation has much less effect than those who have recommended it imagine. This is particularly evident in those cases of erysipelas that are preceded by fever of a day or two's continuance, and whose periods of increase, of status, and of decrease, are not interrupted by external remedies, which, in fact, do no more than diminish the heat, the dryness, and tension of the skin. With the same view it has long been the custom to dust limbs attacked with erysipelas with flour or powdered starch, to apply cataplasms with Goulard's wash, lotions containing alcohol or ether, &c.

Superficial cauterization with the nitrate of silver has been said quickly to stop the progress of erysipelas. The results of some trials I have made of the remedy are in opposition to this statement. (a)

Wandering erysipelas may be attempted to be fixed by the application of a blister to the place it occupies, or to that it has first possessed; internal inflammatory affections, should they occur, are to be met at the same time. Unfortunately, wandering and diffuse erysipelas often show themselves as ultimate phenomena, as the harbingers of inevitable death, in patients exhausted by long suffering. These erysipelatous affections are reflexions of a lesion deeper seated and more serious than a blister will reach or cure.

*Intermittent erysipelas* is a very rare disease; I have never seen it but in the face, and then it was preceded and accompanied by paroxysms of facial neuralgia. Whatever the type it affects, it commonly yields to the bark or sulphate of quinine, exhibited as in cases of periodic fever.

If called in time to see phlegmonous erysipelas of the limbs, after having bled once or oftener, according to the age and constitution of the patient, a number of leeches, in proportion to the extent and intensity of the inflammation, are to be applied; to encourage the bleeding from these the patient is to be plunged into a warm bath, and the parts affected are to be covered with soothing or narcotic cataplasms almost cold; the tepid bath should be repeated on the succeeding days, for it is a powerful means, and too much neglected in the beginning of the disorder. Unfortunately, when patients enter our hospitals, pus is usually already formed, and infiltrates the cellular membrane, or is collected within abscesses in different places. The skin is then hot, tense, shining, and of a deep-red colour. The limb has a pasty or doughy feel, which Boyer signalizes, with justice, as one of the signs of the termination of this disease in suppuration. It now becomes necessary to make a certain number of incisions immediately, which, by loosening the skin and the aponeurotic sheaths, are productive of great relief, give place to a large flow of blood and of sanies, and allow an exit to the pus infiltrated into the cellular substance, or collected into abscesses. In this way the formation of large and numerous abscesses, the occurrence of gangrene of the cellular membrane, and of extensive separations of the skin, are all prevented. The incisions are still useful though the pus is not yet collected into centres. This assertion, made by Mr. C. Hutchinson and disputed by Mr. Samuel Cooper, has become, to my mind, an incontestable truth, since I have witnessed the success with which M. Beauchêne, surgeon to the hôpital St. Antoine, pursues the practice. The number of these incisions ought to be relative to the intensity of the inflammation, and their depth must be calculated according to the swelling of the limb. When gangrene has already occurred in one or several points, it is proper to incise freely, and thus to fight against the inflammation wherever sphacelus has not yet taken possession of the parts. If, then, the advantages of incisions be incontestable, the practitioner must still be on his guard, and not permit any inconsiderate love of action to induce him to slash, and scar indelibly the whole of a limb attacked with phlegmonous erysipelas,

(a) Saturated alcoholic tincture of iodine, made of two scruples to an ounce of fluid, applied by means of a camel's-hair pencil over the whole erysipelatous surface and the surrounding sound skin, is an active and useful remedy. Velpeau recommends a solution of sulphate of iron; one ounce to the pint of water.

which repeated bleeding, the application of emollients, and the use of gentle purgatives would have cured, or at least made curable by a very small number of incisions. (a)

Several observations have been published in praise of blisters to the painful parts in the second stage of phlegmonous erysipelas. The surface of parts affected with traumatic erysipelas has also been slightly cauterized with advantage. The form of the iron employed for this purpose is of little consequence; it is only necessary that the instrument should be applied by a narrow surface to a great number of points of the integument attacked with the inflammation.—Whilst I acknowledge the good effects of these methods of treatment, comparative trials have led me to prefer another: general and local bleedings, and purgatives. These are more effectual in preventing the termination of phlegmonous erysipelas in suppuration and gangrene, whilst incisions give vent to pus infiltrated or collected into abscesses, and always produce a relaxation of parts that is favourable.

*Compression*, often useless and sometimes dangerous in the early treatment of phlegmonous erysipelas, is employed with advantage, towards the end of the disease, to diminish the œdematous and loaded state of a limb. It is the best means at our command in œdematous erysipelas. It has been successfully used in phlegmonous erysipelas complicated with phlebitis.

The precepts relative to phlegmonous erysipelas of the limbs are applicable to some cases of erysipelas of the hairy scalp, that resist bleeding, diluents, emollient applications, emetics and cathartics. An incision that implicates at once the skin, the cellular membrane and the occipito-frontal aponeurosis, eases the painful constriction caused by the distension and stretching of this fibrous membrane. It is usual to put a piece of lint between the edges of the incision in order to prevent their union, which should not be allowed to take place till the swelling of the scalp has completely subsided. Twenty-four hours after the incision, the patient is commonly relieved, and serious symptoms, such as delirium, and others proper to affections of the brain, generally yield within the same space of time.

Erysipelas, to conclude, is occasionally a salutary affection. It has been studied under this point of view by M. Sabatier: it is particularly in regard to some chronic diseases of the skin that erysipelas has brought about effects which perhaps would never have been determined by any other curative means. This beneficial influence

(a) Incisions, as practised by Dr. Hutchinson and Mr. Lawrence, are intended, not to evacuate matter already formed, but to prevent its formation. They constitute a mode of blood-letting, and give relief to a tense and over-distended skin. Mr. Lawrence, in place of several free incisions through the integument, down to the muscles, of about an inch and a half in length, and two or three inches apart, and varying in number from six to eighteen, recommends one long incision, through the whole extent of the affected part. The incisions will be of comparatively little use, unless they penetrate the fascia; and if the inflammation be suspected to have passed beneath the fascia, this should be divided.

Puncturing the part affected, a practice recently introduced by Sir. R. Dobson, of the Greenwich Hospital, is extolled by Mr. Liston and Dr. Bright, but is not thought well of by Mr. Travers. Mr. Nunnely declares that he has not seen a case in which puncturing did not seem to be advantageous, or where any unpleasant effects followed. "The comfort produced in a very short time is often perfectly surprising; the heat and burning pain become much less, the swelling is diminished, and the tendency to spread moderated. Another important advantage is, that it does not interfere with, nor prevent, any other application." (*A Treatise on the Nature, Causes and Treatment of Erysipelas*. Am. edit., p. 201.) Punctures serve to abstract blood, and, in this respect, are a substitute for leeches. The best method of making them is to hold a sharp lancet tightly between the finger and thumb, at such a distance from the point as we wish it to penetrate, thus making the finger and thumb the shoulders of the lancet blade. The depth will vary from one-fifth to two-fifths of an inch; the latter being that which is necessary only in the limbs where the swelling is considerable, when we wish to evacuate effused serum as well as blood. The flow of blood may be promoted by sponging the punctured surface with warm water.



may be exerted even when the disease is seated in a region remote, in a greater or less degree, from the affected parts. And this salutary action of erysipelas is not confined to mere vesicular, or papular, or pustular eruptions, in a word, to the morbid productions that exist on the surface only, or implicate but a certain thickness of the dermis; it may occasionally be seen inducing the resolution and suppuration of scrofulous tubercles, of indolent glandular swellings, modifying in a remarkable manner squamous eruptions of ancient date, causing the resolution and disappearance of syphilitic tubercles, accomplishing a prompt cicatrization of rebellious ulcers, favouring the re-union of the skin with the parts beneath in the fistulous passages about scrofulous sores, limiting lupus in its progress, &c. I shall have occasion to recur again to this influence: in such cases the erysipelas may be left to itself, provided its condition and progress be attentively watched.

The prophylactic treatment of erysipelas is a point worthy of consideration under certain circumstances. Its development may be prevented in females labouring under amenorrhœa, by the detraction of blood every month, at the periods of the menstrual flux. The same plan is to be pursued when the disease seems to occur in lieu of some habitual hemorrhage.

#### *Historical Notices and particular Cases of the Disease.*

234. There are numerous details of cases and several monographs that may be consulted with advantage on simple erysipelas,<sup>1</sup> on phlegmonous erysipelas,<sup>2</sup> on gangrenous erysipelas,<sup>3</sup> on general erysipelas,<sup>4</sup> on erysipelas of the whole of one side of the body,<sup>5</sup> of the face,<sup>6</sup> and of the navel, with inflammation of the umbilical vein;<sup>7</sup> on intermittent erysipelas,<sup>8</sup> on epidemic erysipelas;<sup>9</sup> on the contagion of erysipelas,<sup>10</sup> on the diagnosis of erysipelas and erythema;<sup>11</sup> on erysipelas that is salutary or critical,<sup>12</sup> on the retrocession of erysipelas,<sup>13</sup> on its complication with *phlebitis*,<sup>14</sup> and with cerebral affections.<sup>15</sup> Observations have also been published in favour of compression<sup>16</sup> in the treatment of the disease, of acupuncture,<sup>17</sup> of anointing with lard,<sup>18</sup> with oil of sweet almonds, with cream, and with mercurial ointment<sup>19</sup> whether the disease were simple or of the phlegmonous kind; in recommendation of *blisters*<sup>20</sup> in cases of erratic and of phlegmonous erysipelas; of cauterization with the *nitrate of silver*<sup>21</sup> or of the *actual cautery*<sup>22</sup> in

certain species of the disease. Several remarks on the effects of bleeding<sup>23</sup> ought likewise to be referred to, as also on emetics,<sup>24</sup> on the disadvantages of tincture of opium externally, &c.<sup>25</sup>

Under the general title of erysipelas,<sup>26</sup> Mr. Lawrence has included the ordinary or simple disease, and that in which the inflammation extends to the subcutaneous cellular tissue, the subcutaneous glands, the fibrous sheaths, and the synovial membranes. Rust<sup>27</sup> considers erysipelas rather as an *exanthematous fever* than as a simple inflammatory affection of the skin; and this idea would be correct, were all those diffuse forms of inflammation we see produced by local excitation to be thrown out of the class of erysipelas. P. C. Louis<sup>28</sup> has of late again called attention to the fact of fever frequently preceding the eruption; lastly, Rust has said that erysipelas is always accompanied by a certain accumulation of *animal electricity*, which is perceptible to the hand applied to the inflamed skin, a circumstance which I have endeavoured to verify, but in vain.

CASE IX. *Phlegmonous erysipelas of the face, more decided on the right than on the left side; arachnitis; tardy resort to blood-letting; death;—pus in the veins of the face.*—J. Col, 37 years of age, was admitted into La Pitié, the 14th of December, 1825. Five weeks previously, he had fallen into a ditch, where he remained three quarters of an hour, his legs and part of his body immersed in water. In consequence of this accident, he had pains in the legs, followed by infiltration of the lower limbs and abdomen. These dropsical symptoms were successfully treated by frictions with an ointment containing extract of aconite.

On the 3d of March, 1826, he complained of a sense of constriction about the epigastric region, and vomited without any assignable cause. March 25th.—Appearance of erysipelas of the face, occupying the lower part of the forehead, the eyelids and nose. The red colour of these parts, of no great depth except on the right upper eyelid, disappears on pressure; the swelling, which is little apparent on the cheeks, is very distinct on the forehead and nose, and extends to the temporal region on the right side; the eyelids are œdematous, especially those of the right eye, at the inner angle of which there exists a phlyctena; the inflamed parts are affected by a sharp and pungent heat, more violently felt in the eyelids than anywhere else. The abdomen is soft and tender to pressure, the tongue is dry and coated; the thirst very intense; anorexia, flitting colicky pains, constipation; free excretion of urine; cough without oppression; skin hot; pulse full and very quick; headache, disturbed sleep. 26th.—The forehead, the eyelids, the two cheeks, and the upper lip are red, swollen and shining; the parotid regions and the superior and lateral parts of the neck are also inflamed. The redness that extended over the right upper eyelid is replaced by a large bleb containing a seropurulent fluid; a small vesication of the same kind exists on the inner angle of the left eye. The nose and the whole of the right cheek are covered by yellowish incrustations, formed by the desiccation of a fluid that exudes from between the closed eyelids. The patient complains of darting pains through the whole extent of the parts affected. The febrile symptoms continue; crepitating rattle is heard at the lower part of the right lung; expectoration of mucous matter tinged with blood (*mucilaginous lemonade*). 27th.—Enormous swelling of the face, more especially of the right cheek, and of the parotid regions; livid red colour of the inflamed skin. (*Forty leeches behind the ears, sinapisms to the feet, emollient poultices to the face, mucilaginous lemonade.*) Delirium during the night; alvine evacuation (*mucilaginous lemonade*). 28th.—The swelling of the right parotid region has extended to the lateral parts of the neck and upper part of the thorax. The skin of the face, in some places shining and pallid, is of a livid hue on the cheeks, and upper parts of the eyelids; other symptoms much the same; delirium continues (*same prescription*). Worse and worse; collapse has succeeded the delirium; difficult deglutition. (*Two sinapisms to the thighs: wine and water.*) Death in the course

<sup>1</sup> Mariande (B. M. B.). Essai sur l'érysipèle simple, in-4. Paris, 1811.

<sup>2</sup> Patissier. Essai sur l'érysipèle phlegmoneux, in-4. Paris, 1815.—Olivier. De l'érysipèle phlegmoneux, in-4. Paris, 1830.—Létalenei (J. B.). Diss. sur l'érysipèle phlegmoneux des membres, in-4. Paris, 1824.

<sup>3</sup> Cooper's Surg. Dictionary. Art. Gangrene.

<sup>4</sup> Mercier. Erysipèle universel après l'accouchement.—Rennes. Arch. gén. de méd., t. xxiv. p. 552.

<sup>5</sup> Sioeller. (Loder Journ. für die Chirurg., iv. B. 1. St. p. 149.)

<sup>6</sup> Leveillé. Erysip. de la face, compl. de laryngo-trachéite. (Rev. méd., t. xvi. p. 146.)—Piorry. Gaz. méd., 1833, p. 281.

<sup>7</sup> Dugès. Recherches sur les maladies des enfants nouveau-nés, in-4. Paris, 1819.—Robert Lee. Lond. Med. Gaz., i. iii. p. 533.

<sup>8</sup> Lanc. Fr., i. vi. p. 247 (Erys. intermitt. de la face).

<sup>9</sup> Velpeau. Lancette franç. 1831, i. v. p. 105.—W. Gibson. Relation d'un érysipèle épidémique, observe à Montrose, 1822.—G. H. Weatherhead. An Essay on the diagn. between erysipelas, phlegmon and eryth. (Epidemic on board a vessel.)

<sup>10</sup> Gibson (Edinb. Med. and Surg. Journ.).—Wells. (Trans. of a Society for the Improv. of Med. and Surg. knowledge, vol. ii. n. 17.)—Costallat. Propositions et reflex. sur quelques points de med. et de chir., in-4. Paris, 1832, p. 4.—Willan. Art. Erysipelas.

<sup>11</sup> Hume Weatherhead. An Essay on the diagn. between erysipel., phlegm. and eryth. Lond. 1819.

<sup>12</sup> Sabatier. Propos. sur l'érysip., et les mal. cutan. in-4. Paris, 1832.

<sup>13</sup> Journ. compl. l. xxxi. p. 193.—Bulletin des sc. méd. de Férussac, t. xix. p. 221.—Blandin. Délire à la suite de la répercussion de l'érysipèle. (Arch. gén. de méd., t. xxviii. p. 263.)

<sup>14</sup> Plandin. Journ. compl., t. xli. p. 68.

<sup>15</sup> Symptômes d'encéphalite, sans lésion du cerveau. (Journ. hebdom., t. iv. 2e sér., p. 110.)

<sup>16</sup> Velpeau. Mém. sur l'emploi de la compression dans l'érysipèle phlegmoneux et dans les brûlures. (Arch. gén. de méd., t. xi. p. 102.—t. v. p. 27.)

<sup>17</sup> Bright. Acupuncture dans l'érysipèle. (Gaz. méd., in-4. Paris, 1833.)

<sup>18</sup> Martin-Solon. Lancette franç., i. v. p. 217.

<sup>19</sup> Ricord. Lancette franç., 1831, t. v. p. 109.—C. Broussais. Lanc. franç., i. v. p. 273.—Lanc. franç., février 1833.

<sup>20</sup> Pautissier. Op. cit.

<sup>21</sup> Higginbottom (J.). Guérison de l'érys. de la face par l'appl. ext. du nitrate d'argent. (Rev. méd., t. xvi. p. 293.)—Chomel. Lanc. franç., t. vi. p. 241.

<sup>22</sup> Larrey. Emploi du caustère actuel dans l'érysip. traumatique. (Rev. méd., t. ix. p. 177.)

<sup>23</sup> Dubourg. Arch. gén. de méd., t. x. p. 584.—Louis. Arch. gén. de méd., l. xviii. p. 330.

<sup>24</sup> Desault. Remarq. et Obs. sur l'érysip. (Œuvres de Desault, t. ii. p. 581.)

<sup>25</sup> Guiaud. Obs. d'un empoisonnement produit par l'appl. du laudanum à trop forte dose. (Bull. des sc. méd. de Férussac, janv. 1827, p. 77.)

<sup>26</sup> Lawrence (W.). Obs. on the nature and treatment of erysipelas, 8vo., 1828.

<sup>27</sup> Rust. Sur les caract. spéc. de l'érysip. (Gaz. méd., in-4., 1833, p. 16.)

<sup>28</sup> Louis. Gaz. méd., in-4., 1831, p. 339.



of the day. 30th.—*Examination of the body.* The face is pallid, except the eyelids, which are a little red in the parts that were not covered by phlyctenæ. The subcutaneous and intermuscular cellular tissue cut into, is found infiltrated with yellowish and puriform serum, and small collections of true pus exist before and behind the orbicularis palpebrarum muscles. This purulent infiltration is also found in the cavity of the orbit, and extends towards the temporal fossæ; on the left side, indeed, the cellular tissue of the scalp is itself full of matter. The tumour of the parotid region is formed by a copious effusion of the same purulent serum into the cellular substance surrounding the gland; the gland itself is not affected, but the cellular substance that enters into its composition, is loaded. A similar infiltration is observed to extend to the subcutaneous cellular tissue covering the pectoralis major of the right side. The parietes of the veins of the face and neck, although immersed among pus, present no traces of inflammation. Many of these small vessels contain purulent serum similar to that which is effused into the inflamed cellular substance. The minute arteries appear equally free from particular disease. The arachnoid membrane covering the superior hemispheres of the brain is thickened and opaque; the corresponding sub-arachnoid cellular substance is loaded with serum. The dura mater on several parts of the base of the skull is red, as is also the superposed arachnoid. The third ventricle of the brain contains a large quantity of serum; the lateral ventricles are less distended. The consistency of the brain and cerebellum is natural. *Thorax and abdomen.* Partial but old adhesions of the pericardium to the heart; heart somewhat larger than natural; adhesions between the lungs and pleura; lungs crepitating; redness of some of the ramifications of the bronchia; redness of the mucous membrane of the œsophagus; blackish and greenish hue of the great end of the stomach, and of some parts of the small intestines, which appear to be the result of inflammation and putrefaction; the other organs of the abdomen present no particular appearance of alteration.

## RUBEOLA.—MEASLES.

Vocab. *Rubeola, Morbilli, Blactiæ, Measles.*

235. Rubeola, or measles, is an exanthematous and contagious inflammation, preceded by chills and shivering fits, accompanied by watering of the eyes, sneezing, and hard dry cough, and characterized externally by an eruption of small red spots of the size of flea-bites, prominent at the points where the cutaneous follicles surpass the general level, separated by irregular narrow interstices, in which the skin seems healthy, forming afterwards, by their conjunction, small crescent-shaped patches, which decline towards the seventh or eighth day from the date of the attack, and are commonly followed by a furfuraceous or bran-like desquamation.

236. Measles presents several varieties: 1. *Rubeola vulgaris*; 2. *Rub. sine catarrho*, sive *spuria*; 3. *Rub. nigra*; 4. *Febris morbillosa*; 5. *Rub. anomala*; *Rub. maligna*.

237. *Rubeola vulgaris*, (*morbilli benigni, vulgares*). Common measles presents three *stadia*.

1st Stadium.—(*Stadium contagii*, Rosen.—*Apparatus efflorescentiæ*, Morton.)—Common measles begins with alternate chills and flushes, general uneasiness, lassitude of the limbs, and feeling of depression, pain and weight over the eyes and in the forehead, accompanied by drowsiness and a disposition to sleep. The pulse soon shows acceleration, the skin becomes hot, the surface of the tongue is whitened, its tip and edges are of a bright scarlet colour; thirst is complained of, the stomach is irritable, and there is nausea and sometimes vomiting; the epigastrium at times is painful. On the *second day* of the attack, all these symptoms are aggravated; the eyes grow red and weep incessantly, the sneezing is more frequent, the patient complains of itching in the nasal fossæ, and there is a secretion of limpid mucus from the nostrils; he is oppressed, and feels a load about the epigastric region. The throat is slightly affected; cough, of variable degrees of violence, commences, and, in very young subjects, drowsiness, and, occasionally, slight and passing convulsive fits are added to these phenomena. On the *third day*, the severity of the symptoms

still goes on increasing; the eyes become more sensitive and inflamed than ever, the eyelids and their edges appear a little swollen; there are dry and frequent cough, hoarseness, dyspnœa, a sense of constriction, sometimes of anxiety, in the chest, with drowsiness or delirium; a fit of sickness or of diarrhœa in children cutting their teeth, or a copious sweat, of a peculiar sweetish-sour smell, precedes the appearance of the eruption, which commonly shows itself on the *fourth day* from the invasion of the symptoms of indisposition, which may correspond with the tenth, eleventh, twelfth, thirteenth or fourteenth day of the infection.

2d Stadium.—(*Status morbi*, Morton.—*Stadium eruptionis*.)—Small red spots distinct from each other, almost circular, but little prominent, and very similar, in all respects, to flea-bites, appear first on the forehead, chin, nose, cheeks, and around the mouth, and spread successively, during the same day or on the morrow, over the neck, the breast and the limbs. This eruption is almost always accompanied by itchiness and great heat of skin. The greater number of these small circular spots are, by and by, replaced by others of a larger size, which are sometimes disposed in clusters, (*Rub. corymbosa*), not exactly defined, but tending to the form of a crescent or semicircle (*racematim coalescunt*, Sydenh.). These two kinds of spots are blended and lost in the neighbouring skin; under the finger they convey no impression of a rough, uneven, or prominent surface. The semicircular patches are formed by the junction of the small rounded spots which have already been mentioned, and the little points that compose them may often be counted upon the circles which are separated from each other by interstices or spaces where the skin preserves its natural colour. The colour of these spots is less vivid than that which the integuments present in scarlet fever. It is enough to stretch the skin a little, to make the redness disappear. Small rosy-coloured papular elevations are sometimes observed on the surface of the skin, which, when they are very numerous, give the eruption a peculiar appearance. On the face, the red colour of the patches is at its height about the *fifth day*; on the sixth day, the patches there begin to decline, at the same time that those on other parts of the body become deeper-coloured and more abundant.

On the fourth day of the invasion small spots of a dull red colour are also sometimes to be perceived on the uvula and velum palati, similar to those which are seen on the skin. On the fifth day they become confluent. This slight inflammation causes the patient to complain of dryness and roughness of the throat, and increases the hoarseness that had come on earlier in the disease.

When the eruption is completed, the frequency of pulse, the heat, the thirst, the redness of the eyes, the coryza, the soreness of the throat, &c., decline considerably in intensity, and sometimes even disappear entirely. The sense of pectoral oppression and the cough alone continue in some individuals; the nausea and vomiting have ceased from the fourth day, and the sense of heat, oppression, and restlessness generally vanish about the sixth.

3d Stadium.—(*Crisis; declinatio vel desquamatio*.)—On the fourth day of the eruption, which corresponds with the seventh or eighth of the invasion, the patches of measles begin to die off in the order of their appearance, and then assume a pale yellowish colour. These yellowish spots are more permanent than the redness to which they have succeeded; they cannot be made to disappear by stretching the skin. The epidermis soon begins to be detached in a very minute furfuraceous scurf from those parts which the redness has left; the skin, now become dry and sometimes rough, is affected with a troublesome pruritus that lasts till the tenth or twelfth day. Occasionally, however, the desquamation either does not occur, or is insensible; this, at least, is the case on certain regions of the body, or on several patches of the eruption. At this period the symptoms of inflammation of the air-passages decline gradually; the expectoration, which is always wanting in infants at the breast, affects adults slightly in this variety of the disease; in less simple cases, however, the cough and expectoration continue for some time during the state of convalescence.

238. *Rubeola sine catarrho*.—During the epidemic prevalence of measles, Willan observed that a certain number of patients were covered with an eruption, whose external appearance and course were the same as those of common measles, from which, neverthe-



less, it differed by being unaccompanied with fever, catarrh, coryza, &c. He adds that an interval of several months, or even of two years elapsed between the occurrence of this eruption and the development of common measles, which, however, most commonly happened three or four days after the non-febrile eruption. I have had several opportunities of verifying this fact; and I have seen circumstances attending them which confirmed more decidedly the measly nature of these eruptions. I have, for instance, seen all the children of one family, playing and even sleeping in the same room, attacked with well-marked catarrhal measles, except one, who only exhibited the symptoms of the 1st stadium of the disease, and those of the eruption, without the bronchial affection. Are these cases of measles without catarrh, considering them as effects of an epidemic cause, analogous to the cases of varicella observed during the epidemic prevalence of small-pox? It is difficult, otherwise than by their cause, to distinguish them from certain forms of roseola; to distinguish between them is impossible when they are sporadic. (Vide sub *Roseola*.)

239. Under the title of *rubeola nigra* Willan has signalized an appearance but rarely met with, inasmuch as the eruption, towards the seventh or eighth day, reckoning from the invasion, becomes completely livid, with the addition of a shade of yellow. This variety of the disease has principally been observed to occur in individuals of weakly constitution. Dr. A. T. Thomson, in the case of a child eight years of age, attacked with this variety, observed that the epidermis was raised like a moist spider's web, when the wrist was pressed in feeling the pulse. I have seen various examples of these livid measles in children, labouring under tubercles of the lungs and chronic cæco-colitis, and who were exhausted by diarrhœa and hectic fever. In these cases the greater number of the patches of measles do not disappear under the pressure of the finger; and when the life of the children labouring under them is protracted for a few days beyond the ordinary duration of measles, the skin presents morbillous spots which differed from those of purpura simplex in their form and distribution, but which, like these last, exhibited shades of brown, and of yellowish or dirty gray, according to the degree of re-absorption that had taken place in the blood effused into the skin. I shall give a case particularly adapted to make the reader acquainted with another variety of black or hemorrhagic measles, in which the greater number of the spots were of a vinous red colour, and did not disappear on pressure. This variety does not appear, like the preceding, to be connected with any weakening of the constitution from previous illness; I have met with it in strong and well-constituted individuals. On this occasion I shall call attention to the fact, that in common measles, if the surface of the body be examined with due care and attention, a certain number of patches will almost always be discovered of a deeper red colour than the rest, not disappearing entirely on the pressure of the finger, and subsequently becoming of a yellowish colour and vanishing more slowly than the others during convalescence.

240. *Measles without eruption.* (*Febris morbillosa*.) This variety, not less remarkable than those that precede, has been observed during the epidemic prevalence of measles. Sydenham mentions anomalous measles in 1674, and a *febris morbillosa* that prevailed at the same time, which was characterized externally by an eruption of patches upon the neck and shoulders resembling those of measles, from which, however, they differed in being confined to the places mentioned, and not spreading over the whole body. Gregory goes further when he states that he has seen measles without any eruption whatever. M. Guersent has observed some individuals in families where measles prevailed, exhibiting all the other symptoms of the disease except the eruption. I have myself several times seen cases of measles in which the eruption was incomplete, and which might have been referred to the morbillary fever of Sydenham, but I have never met with any instances like those mentioned by De Haen, Gregory and M. Guersent, although my attention has been turned to this point these some years past.

Influenza and several varieties of bronchial affection sometimes prevail at the same time as measles.

241. *Anomalous and complicated measles (rubeola anomala).* In children who have fine and delicate skins, measles sometimes appears

partially on the third day; in others differently constituted again, it does not show itself before the fifth or sixth day; its progress is often checked or altogether stopped by exposure to cold, or the unseasonable use of purgatives. A little girl attacked with measles and complaining of pruritus in the nostrils, was believed to have worms; after the exhibition of a purge the eruption disappeared suddenly, and could not be recalled. Such a recession of the eruption is often accompanied by pains of the bowels, by diarrhœa, difficulty of breathing, delirium, convulsions, &c.; in other circumstances the eruption appears on the arms after having been observed on the face; or, otherwise, it is not propagated to the limbs, which do not exhibit a single patch over their entire extent.

242. In new-born babes papular eruptions resembling strophulus, and in patients of different ages, vesicles analogous to those of miliaria, blebs of pemphigus, petechiæ, accidental pustules, pustules of the natural or inoculated small-pox, epistaxis, acute inflammations of the eyelids, affections of the brain, different inflammatory affections of various degrees of importance, such as croup, bronchitis, pneumonia, muco-enteritis, &c., by being associated with the eruption of measles, give a vast variety of symptomatic characters to the disease, the peculiar form of each of which must be sought for and studied in particular cases.

When diarrhœa occurs in the course of measles, it is sometimes a serious symptom, especially if it be accompanied by restlessness and frequent cough. Diarrhœa occurring during convalescence may prove, according to its nature, duration and effects, either dangerous or critical and salutary.

Convulsions frequently enough accompany the disease when it happens during dentition, and very often terminate fatally.

243. Measles may sometimes exert a beneficial influence on chronic inflammations of the skin. I had a young woman under my care at the hôpital St. Antoine, on account of chronic eczema of the face, of the hairy scalp and ears, who got well under a violent attack of measles. On the contrary, however, M. Alibert has given two cases of children labouring under impetiginous eczema of the scalp (*achor mucifluus*), who, having contracted the measles, were suddenly relieved of their aches, but not long after sunk and died.

In some cases measles has appeared to cause the development of pulmonary tubercles; often, too, it seems to hasten their progress.<sup>1</sup> When measles is contracted at the same time as small-pox, the measles is commonly first developed, and then causes a suspension of the progress of the variolous eruption. Viesseux relates an instance to the contrary.

244. *Consecutive diseases.* (*Morbi secundarii; dregs.*)—During convalescence from measles, we frequently observe, on the back, groins and lower limbs, pustules similar to those of ecthyma, or an eruption of the same form, but of smaller size, scattered over the feet, legs, thighs and scrotum. In other cases, we meet with chronic inflammation of the eyelids, of their margins, or of the conjunctiva, with vesicular eruptions upon the external ear, and chronic enlargements of the subcutaneous lymphatic glands; lastly, with bronchial affections, obstinate cough, analogous to whooping-cough; inflammatory affections of the mucous membrane of the cæcum and colon, of the lungs, pleura, &c., which are all frequently made more obstinate by their special cause than other inflammatory affections having the same seat and the same extent, but which are induced under other influences. Measles is a disease that is often followed by phthisis, as Fred. Hoffmann long ago remarked. (a)

245. *Anatomical observations.* Vogel regarded the eruption of measles as situated in the epidermis. More accurate investigation has showed that measles especially affects the reticular tissue of the skin and the mucous membrane of the air-passages, as these parts are found injected in the bodies of those who have died of this disease. The anatomical characters of measly inflammation, the redness of the

(a) I have seen tubercular phthisis succeed immediately to measles. The hectic fever seemed to be but a continuation of the rubeolous one, and terminated fatally in a short period—seven weeks from the first attack. Otitis is a common sequela of measles.

<sup>1</sup> Andral. Clinique Medicale Ire., ed. iii. p. 49.



bronchial and intestinal lining membrane, and the secretions poured out from these, are not apparently different from those which are observed after other inflammatory affections not of a specific nature. Laennec conceives that the suffocating orthopnoea, which sometimes carries off children after measles, is caused by true idiopathic oedema of the lungs. I have seen this difficulty of breathing produced by intense bronchitis, with a fatal *pseudo-membranous exudation*. In anomalous and complicated cases of measles, lesions of various kinds, according to the parts affected, are discovered; it sometimes happens, also, that the death of the patient cannot be explained by any alteration of the solids detected in the examination of the dead body. (a)

246. *Causes.* Sporadic or epidemic measles is produced by a specific cause, the nature of which is unknown, and which, in general, acts no oftener than once on the same individual. The disease is readily transmitted among those who live in the same house; yet, so necessary is a certain disposition to contract the infection, that we see individuals who resist the influence of a first epidemic, attacked during a second. Tozetti, Schack, De Haen and Meza, inform us that they have seen measles affecting the same individual again and again, whilst Rosen assures us that, during the course of a practice of forty years, he had not known a single instance of the kind. Bateman admits the possibility of such an occurrence, from the statement of Dr. Baillie. In a letter to G. L. Targioni, Genovesi<sup>1</sup> states that, during the continuance of the universally prevalent measles of 1787, he had examined forty-six persons, children as well as adults, affected with measles, although they had already gone through the disease some years before. In the epidemic measles that reigned at Vire, in 1777, Duboscq had occasion to treat several children whom he had attended in 1773. Since the publication of the first edition of the present work, I have seen three very remarkable instances of the recurrence of measles. One occurred in the person of a little girl, seven years of age, who, three months after a well-defined and severe attack of measles, complicated with pneumonia, was again seized with the disease, ushered in by catarrh, dry cough, and affection of the nose, and followed by obstinate inflammation of the eyes.

Some individuals may have frequent communication with patients labouring under measles, without taking the disease. A young married woman having contracted measles, communicated it to her eldest daughter, three weeks afterwards, whilst a younger child, who was night and day beside her mother and sister, escaped entirely. Nevertheless, the number of those who appear unapt to contract measles, is comparatively smaller than that of individuals unvaccinated, who continue to resist the contagion of small-pox. Bursarius goes the length of saying that there is probably hardly an individual in existence, who is at all times unsusceptible of the infection. Measles attacks every age, and occurs in every climate. P. M. d'Anghiera says that, previously to the year 1518, when it was imported, the disease was unknown in the New World.<sup>2</sup>

The disease is usually observed in young children; adults sometimes suffer from it, elderly persons very rarely. Vogel and others assure us that infants at their birth have presented traces of measles. It more frequently attacks children after than before teething. Dr. Barron has observed that angina and cerebral affections were the most common complications of measles in infants at the breast. The disease is communicated by contact or by infection; it may also be produced by the inoculation of the blood of those labouring under it, as the experiments of Dr. F. Home, verified by those of Speranza during the epidemic prevalence of measles at Milan, in 1822, have proved. Speranza at first inoculated six lads, in one of the work-houses, in whom the disease was soon developed, and ran its course regularly and mildly. The same experiment has been repeated by other practitioners, as well as by Speranza himself, under different cir-

cumstances. A very slight incision or scratch is made with the point of a lancet over one of the largest and most inflamed of the measly patches, so as to draw a little blood. A few punctures are made in the arm of the party to be inoculated, with a lancet poisoned with this blood, and the part is covered with a bandage. The effects of this inoculation are generally manifested a few days afterwards. Dr. Alex. Monro<sup>3</sup> and Locke<sup>4</sup> communicated measles by inoculating with the tears and saliva of persons labouring under the disease. Dewees informs us, on the authority of Dr. Chapman, that attempts of the same kind were in vain made at the dispensary of Philadelphia, in 1801, although the blood, the tears, the nasal and bronchial mucus, and the exfoliated lamellæ of the epidermis were successively employed in the trials. I have not myself repeated these experiments.

247. Measles most commonly prevails as an epidemic at the end of winter and beginning of spring. That observed in 1671, in London, by Sydenham, and that of Upsal, in 1752, described by Rosen, were *benign*; but the disease, in an *anomalous* and *malignant* form, prevailed at London in 1674; occurring at Plymouth in 1741, and mentioned by Huxham. It was often complicated with *pneumonia*. In the Foundling Hospital, in 1763 and 1768, Watson twice saw a *putrid* form of measles prevailing. Very severe forms of measles, complicated with miliary eruptions, were observed at Vire, in 1772 and 1773, and are described by Polinière and Le Pecq de la Cloture. The measles which prevailed at Paris in the year vi—(1797), were greatly complicated by *abdominal affections*; in the year vii—(1798), they were sometimes associated with scarlatina. During an epidemic measles, observed at the end of 1800 and beginning of 1801, by Consbruch,<sup>5</sup> several children were attacked with *morbillary fever without eruption*. They suffered under a violent fever, with all the catarrhal symptoms which accompany measles, and then there came out either an eruption that was scarcely distinguishable, and disappeared rapidly, or there followed a copious sweat, or a diarrhoea, or an unusual excretion of urine. Every one of these evacuations had something peculiar about it; they were all evidently, says the narrator, *morbillary fevers*, which had been preceded by influenza and hooping-cough.

By contrasting the accounts of these and a great many other epidemic measles that have been left us, we perceive that the majority of them have presented a character either of *mildness* or *malignity*, and that almost all, without exception, were preceded by catarrhal affections, by influenzas, hooping-coughs, &c.; diseases of old pointed out as preludes to *morbillary constitutions*. These have farther, sometimes, been observed to follow epidemic small-pox. During the present year, 1833, we have had occasion to remark this succession, referred to particularly by Störck and De Haen. I have seen many children who, after having had a dry barking cough (*toux ferine*) for a fortnight, have then been attacked with measles. (a)

248. *Diagnosis.*—During the period of *contagion* or of *efflorescence*, the existence of measles may be presumed if the fever be accompanied by redness of the eyes, a copious flow of tears, and of thin mucus from the nostrils, with sneezing, pain and heat of throat, and dry and distressing cough; if measles prevails at the time, and the patient have not yet had the disease; if other members of the family are affected in the same way, or if any communication has been held with infected individuals. At the *beginning of the eruption*, the diagnosis is not yet quite certain; the small red spots by which the disease is announced bear a strong resemblance, whilst they are yet isolated, to those of small-pox; but they are not long in being gathered into circular bunches or groups, (*in racemos collecta*, Forestus;) if they be generally a little raised, and, as it were, papular on the face and

(a) The chief deviation from health in the state of the blood, in measles, as noticed by M. Andral (*Hématologie Pathologique*), is in the increase of red globules. There is but little change in the proportion of the fibrin.

<sup>1</sup> Avisi sopra la salut. umana, vol. vii. litt. al Sign. dot. Lig. Targioni, pp. 267-272.

<sup>2</sup> De Rebus Oceanicis et Orbe novo. Dec. iv. cap. ix. fol. 62.

<sup>3</sup> De Ven. Lymph. valvulosis, 8vo. Berol, 1757, p. 58.

<sup>4</sup> Gentlem. Mag., 1767, p. 163.

<sup>5</sup> Vermischte practische Bemerkungen. (Hufeland's Journal, B. xiii. St. 3. S. 31.)

(a) Measles sometimes assumes an epidemic character at the same time as small-pox; in its increase and decline corresponding with the like progress of the latter disease. This was eminently the case in the years 1823 and 1824, in Philadelphia, as recorded in the papers on "Small Pox and Varioloid," by Drs. Mitchell and Bell, in *North Am. Med. and Surg. Journ.*, July and Oct., 1826.



forehead, they present the appearance of true *stains* on the breast and limbs, very different from the *elevations* of variola, which, at a later period, become true pustules. Measles presents characters which distinguish it completely from the other exanthemata, and particularly from scarlet fever. In the latter disease, the redness is evenly spread and continuous, the eruption is not grouped or clustered, with interspaces of sound skin, or its patches, at least, are much larger than those of measles, and have an appearance more analogous to what is observed on erysipelatous surfaces. When the redness and tumefaction of the cheeks are very great in measles, the particular characters of the morbillary exanthema, very evident on other parts of the body, may be there obscured. Lastly, in the greater number of cases of measles, there is a hard dry cough, (*toux ferine*;) and sometimes expectoration of a particular kind; whilst, in scarlatina, the tongue, the mouth, and the throat are commonly of a vivid red, without cough or expectoration. In scarlatina, the cuticle is thrown off in large flakes, especially over the palms of the hands; whilst, in measles, it is detached in scales or scurf. Measles differs from *summer roseola* less in the form and appearance of the eruption than in being so uniformly attended by weeping of the eyes, cough, alteration of the voice, &c. It is more difficult to distinguish measles, and especially the variety *without cough*, from those eruptions which Willan has united under the head of *roseola*. (See *Roseola*.)

The occurrence of the eruption, in common measles, will always prevent the disease from being confounded with ordinary pulmonary catarrh, or with influenza. At the close, morbillary catarrh sometimes gives occasion to a particular kind of expectoration, which has attracted the attention of M. Lerminier and of M. Andral. At first mucilaginous, clear and limpid, at the end of three or four days the expectoration becomes thick, rounded into pellets, smooth on the surface, of a greenish-yellow colour, remaining perfectly distinct from each other, and swimming in a large quantity of ropy and transparent mucus, similar to the matter coughed up by some phthisical patients. By and by, this form of expectoration is exchanged for another, which adheres to the bottom of the vessel, and seems composed of a grayish homogeneous mucus, mixed with air and saliva, and very similar to the ordinary matter expectorated during chronic catarrhal affections. In young people, the expectoration is wanting, or not at all abundant; and many cases of measles occur in older subjects, without being attended with expectoration.

In reference to those *morbillary catarrhs* (*measles without eruption*), which have been observed to occur during epidemic measles, and are owing to the specific cause of this disease, they present several characters, even during life, adequate to distinguish them from common inflammatory affections of the air-passages; the cough is sonorous, and has a peculiar harsh and hoarse quality; the expectoration is occasionally in pellets, (*nummulaires*, *coined*;) and the continuance of this catarrhal affection is analogous to that of common measles. I know not whether a person labouring under morbillary catarrh has the power of communicating common measles, accompanied with an eruption, or not; a circumstance which, were such a power possessed, would constitute an important diagnostic feature in this form of the disease.

In measles it is always well, by a careful examination of the organs subservient to digestion and respiration, to ascertain the extent and intensity of the internal inflammations which accompany the progress of the disease, and particularly to watch those of the gastro-pulmonary mucous membrane.

*Morbillary ophthalmia* commonly appears before the development of the eruption. It is always attended by a great flow of the fluids of the eye, and follows the course of the principal affection. In weakly and scrofulous children, this adjunct does not often appear till towards the decline of the exanthema. As to any ophthalmic affection that may come on later, it must be held owing rather to imprudence in diet, exposure to cold, &c., than to the special cause of measles.

249. *Prognosis*.—Epidemic measles, so generally a mild complaint in temperate seasons and climates, is often a much more destructive disease in inclement seasons, and in countries that are either very hot or very cold. Yet the fact is certain that the same town, or the same province, may be visited at different times, by measles as an

epidemic, of a very benign, or of a very destructive character.—The epidemic of 1671, observed at London by Sydenham, was benign; that of 1674, on the contrary, was remarkable for the frequency with which the disease was complicated with peripneumonia.

Mild and regular measles ought to give us no solicitude, especially when the symptoms decline after the eruption.

Regularity in the course of the disease, little severity in the symptoms of gastric or pulmonic inflammation, and in the fever, general moisture of the skin after the appearance of the eruption, an equal distribution of the patches over the face, the trunk and the limbs, are all favourable symptoms. Tissot says that considerable evacuations by sweating, by the urinary organs, and bowels, in the course of the disease, are of good augury; I have witnessed many very speedy recoveries without any of these evacuations taking place, and I have generally seen diarrhoea more pernicious than salutary.

The *precursors* of the eruption are generally severest in young children, especially during dentition. The disease is most dangerous in pregnant women, and in women newly delivered, in individuals who have long laboured under a chronic affection of some important viscus, and especially in those who are affected with pulmonary tubercles. Still the severity of the eruption is, in general, subordinate to the gravity of the internal lesions that accompany or that succeed it. The eruption of the measles before the third day, its tardy, irregular, or incomplete appearance, its sudden or rapid disappearance, a leaden hue of the patches, the evolution of petechiæ with much dyspnoea, are serious symptoms. They often proclaim the existence of pneumonia, which is at once detected by auscultation and percussion of the thorax. The livid or blackish tint of the spots does not make the prognosis more unfavourable in certain cases of *hemorrhagic* measles, which in other particulars exhibit the usual symptoms of the common disease.

The disappearance of the eruption from exposure to cold, may be followed by serious metastases, and sometimes even by death.

The co-existence of several kinds of inflammation of the skin, and particularly of that of variola, renders the prognosis more doubtful if the general disturbance of the system is increased. Affections of the brain and of its membranes, croup, laryngeal angina, and pseudo-membranous bronchitis may rapidly bring about a fatal termination, which, in the majority of cases, then happens towards the eighth or ninth day from the invasion, or else at a much later period, in consequence of the progress of *secondary* diseases.

250. *Treatment*.—When the inflammation of the air-passages, that accompanies the eruption of measles, is of no great intensity, and the disease advances mildly and regularly in its course, the treatment is exceedingly simple. The patient must be covered so as to defend him from cold and sudden changes of temperature, but not so as to make him feel loaded and oppressed with heat; he must be kept upon low diet, and directed to make free use of any mild or slightly diaphoretic tepid drink; to allay the cough and irritation about the throat, he may have some sweet mucilaginous mixture to take by spoonfuls, and inhale the vapour of warm water at intervals, which will, probably, alleviate both the coryza and soreness of throat; the eyes must also be defended from too great a glare of light. Such are the means which it is generally proper to employ in the treatment of simple or common measles. During the whole course of the disease, children, who are apt to toss off the bed-clothes, and thus become exposed to the cold, ought to be sedulously watched both night and day.

The treatment of measles without catarrh, may be all comprised within an unstimulating plan of diet, and the use of diluents.

The inflammatory affections that precede, accompany, or follow measles, in proportion as they are severe, require a greater degree of care and attention on the part of the practitioner. The application of leeches to the epigastric region, when the intestinal canal is the seat of the adventitious malady, and to the fore part of the neck when laryngitis is threatened, with one or two bleedings from the arm, when the lungs are invaded, will commonly give a most favourable turn to the symptoms, secure the development of the eruption when it has not yet appeared, regulate it when it has come out imperfectly, and bring about its restoration when it has vanished suddenly.

Bleeding may be employed in every period of the disease, should any complication indicate the measure as necessary; it is most gene-



rally enforced previously to the breaking out of the disease. The appearance of the menstrual flux, or its existence, if no abatement of the symptoms have followed, presents no obstacle to the detraction of blood. In very young subjects, the application of leeches to the upper part of the chest is generally preferable to bleeding from a vein, and they ought to be repeated in numbers and frequency according to the urgency of the symptoms; in children under five years of age, general blood-letting is not indicated, except in the event of threatened and sudden suffocation, or of very severe pneumonia.

The leech-bites sometimes flow so freely when the breathing is oppressed, that they require to be watched; attention should at the same time be paid to keeping the surface of the body from all impression of cold, of which there is always great risk whilst the cloths or poultices are changed, should these have been employed to encourage the bleeding; or otherwise, when the patient is uncovered for the purpose of having the flow of blood checked by the application of starch, or lint, or, should these fail, of the nitrate of silver in substance.

The oppression, anxiety, palpitations, and general restlessness, observed on the third, fourth, or fifth day of the disease, do not require general or even local blood-letting for their relief, unless these symptoms be unquestionably due to acute laryngitis, intense pneumonia, or very extensive bronchial affection. In any other case bleeding might be hurtful by interrupting the natural course of the disease, rendering the eruption less abundant, and the crisis less decided. When the detraction of blood is abstained from, the oppression and anxiety, and difficulty of breathing, subside after the appearance of the eruption. I ought to add, that the general or local bleedings practised by Rhazes *ad diliquium*, and by Mead and Selle in greater moderation, have not so marked and beneficial an effect on the inflammatory affections of the air-passages depending on measles, as on those produced by exposure to cold, or any other cause not of a specific nature.

Should the eruption happen to disappear suddenly, it is well to try to ascertain whether this event be owing to the accession or increase of any internal inflammation, or to convulsions, or, finally, be not the effect of exposure to cold. In the former case, the complication must be met directly and in the usual way; in the latter, the patient must be plunged into a warm bath, or have a succession of hot cloths applied to his chest and extremities, with a view to excite perspiration and restore the eruption: if the case seem very serious, sinapisms may even be applied over the same parts. Blisters are more particularly useful in cases of measles complicated with pleurisy or pneumonia, after one or two bleedings have been practised. (a)

When *convulsions* supervene in children attacked with measles during teething, leeches must be applied under the ears, a blister be put upon the scalp or nape of the neck, and small doses of calomel given internally, at the same time that means are used to recall the eruption, should this have receded. The reappearance of the exanthema in such cases ought not always to induce us to prognosticate favourably of the issue; I have seen the convulsive fits continue in spite of this event, and children die a few hours after its occurrence.

When there is *diarrhœa*, it should be treated by soothing poultices to the abdomen, by mucilaginous injections, and by opiates in small doses. The practitioner must be on his guard not to confound simple serous diarrhœa with those slimy and bloody evacuations that indicate inflammation of the mucous membrane of the cæcum and colon, and require the application of leeches to the fundament and along the course of the large intestines.

In *laryngeal and tracheitic inflammation*, accompanied with frequent distressing cough having a croupy sound, it is necessary to abstract blood from the fore part of the neck, and then to administer emetics of tartrate of antimony or of ipecacuanha; the effort of vomiting is almost always followed by beneficial diaphoresis; in merely purgative doses, these medicines prove much less useful.

(a) In cases in which the eruption recedes, and there are accompanying marks of pulmonary or bronchial phlogosis, blood-letting and the cooling regimen will be the most appropriate treatment. I have known free drinking of cold water bring out the retrocedent eruption, and even cause mild diaphoresis.

*Inflammation of the throat* is allayed by soothing drinks and gargles, and by the foot-bath; should slight epistaxis supervene, it ought not to be checked.

The *ophthalmia of measles*, if slight, may be left to itself; if more severe, it should be treated by leeches and soothing fomentations; a blister to the nape of the neck and purgative medicines are required when the affection remains during convalescence: it is, in general, a disease of little moment. (a)

The expectant or moderate antiphlogistic plan of treatment is available in the variety of *hæmorrhagic measles*, which, in its symptoms, assimilates itself with common measles. When, on the contrary, the eruption is very pale and has a livid tinge, when the pulse is small, quick, and the skin is scarcely or not at all hot, and these phenomena appear linked with a cachectic state of constitution, weak wine and water, decoction of bark, camphor and ether, sometimes prove means of establishing a beneficial reaction; a phenomenon which it must also be a main object to induce whenever the regular course of measles appears to have been interfered with by the abuse of bleeding, or the effect of any considerable accidental hemorrhage.

Paleness and lividity of the patches, the formation of petechiæ, prostration of strength, and other adynamic symptoms, are occasionally, and during certain epidemic morbillary constitutions, the most frequent characteristics of measles. Blisters applied, for short intervals, to large surfaces of the body, camphor, Virginian snake-root, and preparations of bark internally, are the remedies which have been most generally recommended in this *malignant measles*; a form of the disease not very often seen at the present day.

In measles, accompanied by very severe *catarrhal* symptoms, and in the disease where the bronchial affection is very great, whilst the eruption is but scanty, and still more, whenever suffocating dyspnœa, without symptoms of pneumonia, give cause to apprehend an attack of pseudo-membranous bronchitis, an emetic of the tartrate of antimony, or ipecacuanha, on the second or third day of the disease, will be found sensibly to lessen the symptoms of inflammation in the air-passages, and to favour the development of the eruption. The same means have been recommended, in a general way, to recall the eruption when it has chanced to have receded. I have had more frequent recourse to blood-letting, to the warm bath and blisters, when these serious cases have occurred in my own practice. (b)

During *convalescence*, a spontaneous and passing diarrhœa has sometimes appeared to aid recovery from secondary inflammations of the conjunctiva, of the larynx and of the lungs. By leaving this evacuation unchecked, in every case, we should frequently run the risk of seeing our patient perish, under the drain and irritation of obstinate inflammation affecting the mucous membrane of the cæcum and colon,—diseases much more frequent than simple serous and critical diarrhœa in measles. With a view to prevent or to combat secondary diseases, however, some experienced practitioners have advised us to imitate the process of nature, and to make use of the mildest purgatives, such as a solution of manna, of cream of tartar, &c., in the decline of the disease. This practice I have adopted in every case where the organs of digestion have escaped or been very slightly affected during the course of measles.

When, in spite of this precaution, morbillary catarrhal affections remain stationary, or continue beyond the usual period of convalescence, blisters as rubefacients, applied for a short time to the breast, or kept open on the arm or thigh, are always of service. (c) The diet of children, under measles, requires to be carefully watched. I have often prescribed asses' milk, in those cases of severe bronchial affection when there seemed reason to fear that the exanthematous disease might cause or hasten the development of tubercles in the lungs.

(a) In children of strumous habits and whose hygienic condition is unfavourable, ophthalmia from measles is a protracted and obstinate disease.

(b) Tartar emetic is often borne in gradually increased doses at short intervals in these cases, and is productive of excellent effects.

(c) Careful diagnosis pointing out the seat of phlogistic irritation—in the bronchia or lungs—recourse should be had to local blood-letting, by leeches or cups for its removal, antecedently to the use of blisters or rubefacients.



The period at which the contagion of measles ceases to be subject of alarm, is not rigorously ascertained. Isolation, which is the only prophylactic means we know, should be extended to about the twentieth day. In epidemic measles of a severe and malignant kind, prudence suggests the propriety of removing children from the theatre of the epidemic. When the disease is of a favourable kind, however, far from dreading it, we have been even advised to inoculate those who do not contract it naturally, in the hope of still further increasing its mildness, or of protecting the constitution against the visits of a more serious infection at a future time.

#### Historical Notices of the Disease and particular Cases.

251. Rhazes<sup>1</sup> does not speak of measles as a new disease, but was one of the first who described it accurately. He also distinguishes it from variola by a particular name (*hasba*). The learned and laborious researches of Willan<sup>2</sup> do not, in my opinion, prove that this disease was known to the Greek and Roman physicians, nor that it had been seen in Europe during the fifth and sixth centuries. Constantinus Africanus says it was first observed in the eleventh century, and described under the name of *morbilli*. Rhazes, Riverius and Sennertus have maintained the affinity of the measles and small-pox. Hoffmann<sup>3</sup> and Gruner have considered measles as a particular kind of exanthematous catarrhal fever. Sydenham<sup>4</sup> has given a good description of its two principal forms—*morbilli regulares*, *morbilli anomali*. Some phenomena, such as the *slowness of the pulse*<sup>5</sup> during the period of desquamation, and the particular appearance of the matters expectorated,<sup>6</sup> have given occasion to observations that are useful. Interesting remarks have been published upon *congenital measles*,<sup>7</sup> on the recurrence of measles,<sup>8</sup> on measles without eruption, (*morbilli sine morbillis*),<sup>9</sup> the occurrence of which cannot be disputed. We have, also, much excellent matter on *epidemic measles*,<sup>10</sup> on its complication with *pneumonia*,<sup>11</sup> with *severe dyspnoea*,<sup>12</sup> with *arachnitis*,<sup>13</sup> with *gastritis* and *enteritis*,<sup>14</sup> with *ecchymosis*,<sup>15</sup> with *variola*,<sup>16</sup> with *vaccinia*,<sup>17</sup> on measles occupying *one side of the body only*,<sup>18</sup> and on a variety of the disease—*rubeola varioloides*—probably a complication with papulæ or accidental vesicles;<sup>19</sup> lastly, on the most common *secondary diseases*, such as inflammation of the thoracic or abdominal viscera, and others fortunately of rarer occurrence, such as

<sup>1</sup> Rhazes. De variolis et morbillis, in-12. Gottingæ, 1781.

<sup>2</sup> Willan. Miscellaneous Works, comprising an inquiry into the antiquity of measles, etc., in-8. Lond., 1821.

<sup>3</sup> Hoffmann (Fred.). De febris, sect. i. cap. viii. (febris morbillosa).

<sup>4</sup> Sydenham (Th.). Opera med., in-4. Genève, 1769, t. i. pp. 120-143.

<sup>5</sup> Hasper. (Bull. des sc. med. de Ferrussac, t. xi. p. 125.)

<sup>6</sup> Andral (G.). Recherches sur l'expectoration, in-4. Paris, 1821, p. 27.—Louis. Journ. hebdom., t. viii. p. 439.

<sup>7</sup> Roscu. Maladies des Enfants, chap. xix. p. 255.

<sup>8</sup> Morton. Exercit. III. cap. 3, p. 18.—De Haen. Febr. divis.—Divis. VI. 6, p. 107.—Targioni Tozzetti (Jov.). Prima raccolta di osservaz. p. 101, in-8. Firenze, 1752.—Duboscq de la Roberdière (Journ. de med., t. xlviii.)—Baillie. Transact. of a society for the improvement of medic. and chirurg. knowledge, vol. iii. p. 258.—Cazenave. Journ. hebdomad., t. iv. p. 301.

<sup>9</sup> De Haen. Tractatus de febr. divis.—§ vi. De febre morbillosa: "Tempore morbillorum epidemicorum, at et eo variolarum, frequentes sunt febres morbillosæ ac variolosæ; ita nimirum vocatæ, quod febres hæc eodem modo, iisdemque cum symptomatibus, decurrant, ac si efflorescentiæ hæc subsequatur forent, nec subsequuntur tamen. Curatio eadem est, quam quæ fit in stadio contagiosa, variolarum ac morbillorum."—Bang (Ludov.). Selecta diarii nosocomii fredericiani pro anno 1781 (Act. soc. havn., vol. i. p. 206): "Morbillis adhuc multi ægrotabant.....Non nulli febre morbillosa cum omnibus ejusdem symptomatibus excepto ipso exanthemate decubuerunt."—Consbruch. Opus. citat.—La Fièvre morbillieuse de Sydenham était une rougeole anormale accompagnée d'une légère éruption.

<sup>10</sup> Sydenham. Op. cit.—Ranoë (Andr. Br.). Act. soc. havn., vol. i. p. 206.—Lepècq de la Clouère. Collect. d'obs., t. i. p. 484, in-4. Rouen, 1778.—Gendron. Epidem. à Vendôme, 1821 (Rev. méd., t. xiii. p. 536).—Dufau. Epid. à Montmarais (Ann. de la med. phys., avril 1828). Lombard. Epid. de rougeole à Genève, en 832 (Gaz. méd. 1833, p. 89.)

<sup>11</sup> Sydenham. Op. cit. (epid. 1674).—Pinel. Nosogr. philosoph., t. ii. p. 61, in-8, 1833 (epid. 1799).—Guerent. Journ. des hôp., in-fol., p. 521.

<sup>12</sup> Reil. Memorab. clinic., t. i. part. ii. p. 11.—Laennec. Tr. de l'auscultat., 2 ed. Paris, 1826, t. i. p. 351.—Andral. Revue médic., t. iii. p. 351. 1834.

<sup>13</sup> Parent-Duchatelet. Traité de l'arachnitis, p. 327.

<sup>14</sup> Bricheteau. Arch. gen. de med., t. v. p. 217.

<sup>15</sup> Lancette franç., t. v. p. 290.

<sup>16</sup> De Haen. De febre morbillosa (Rat. med., t. iv. p. 87).—Rougeole suspendant la marche de l'innoculation (Journ. gen. de méd., t. iv. p. 460).

<sup>17</sup> Gregory (G.). Lond. med. gaz., vol. x. p. 440.

<sup>18</sup> Rust. Bulletin des sc. med. de Ferrussac, t. xvi. p. 236.

<sup>19</sup> Sauvages. Nosol. meth., cl. iii. ord. i. gen. 4, spec. 3.

amaurosis and anasarca connected with the particular condition of the kidneys, and state of urinary secretion referred to by Dr. Bright.<sup>20</sup> In the treatment of measles, we have also particular researches into the beneficial effects<sup>21</sup> and into the ill consequences<sup>22</sup> of blood-letting, remarks on the use of *blisters*<sup>23</sup> in the anomalous disease, on *emetic-cathartic medicines*,<sup>24</sup> on *cold lotions*,<sup>25</sup> on the cure of *measly ophthalmia*,<sup>26</sup> on the *inoculation of measles*,<sup>27</sup> on measures signalized as *preservative* from its attacks,<sup>28</sup> and on the mortality which it caused at Paris in 1830.<sup>29</sup> The dissertation of M. J. M. R. Lefort,<sup>30</sup> and the treatise of M. Roux,<sup>31</sup> are worthy of being particularly consulted.

CASE X. *Hemorrhagic measles*.—Laury, admitted 10th of July, 1828, has complained for three or four days of headache, general pains in the loins, irregular chills, sense of heat in the fauces, and difficulty of swallowing, lachrymation, symptoms of cold, redness and swelling of the pendulous velum of the palate and tonsils, cough with little expectoration, considerable heat of skin, which, in the anterior and posterior thoracic regions is the seat of a violet-coloured eruption forming small arcs of circles in no great number, and, as yet, not very well defined. A few scattered vesicles are, further, distinguishable on the dorsal region. On the 12th the patches of eruption had increased in number; they evidently occurred under the form of parts of rings incompletely separated from each other by intervening portions of sound skin. These patches, of a deeper red than those of common measles, and rather resembling petechiæ, were numerous and scattered over the whole surface of the body. They could not be made to disappear entirely under the pressure of the finger. Other symptoms as before; chest sonorous; a little mucous rattle; expectoration white, compact, homogeneous, and surrounded with a little transparent fluid; pulse not much affected; belly soft, and bowels torpid. (*Diluent, cough julep; low diet.*) 13th.—The patches of the face disappeared on pressure; those of the trunk and other regions did not alter under the finger. They were not of quite so deep a hue on the breast as before, but on the trunk they appeared almost black, and, except in the circular arcuate arrangement, exactly like the stains of purpura hemorrhagica. The eyelids now began to desquamate. Next day, 15th, the colour of the eruption, although not quite so deep as it had been, was still remarkably dark. 18th.—A slight, and by no means troublesome cough, is now the only symptom of the disease that remains, except the peculiar colour of the skin in some districts, which, however is becoming every hour less and less livid. 24th.—The eruption was now extremely pale, and had assumed a yellowish tint. The truly hemorrhagic spots were still apparent; but the disease was virtually gone; to guard against accidents, however, the patient was not allowed to leave the hospital before the 1st of August.

CASE XI. *Measles; croup; death: loaded state of the left, inflamed condition of the right lung. Inflammation of the mucous membrane of the small intestines and colon; idiotism; brain apparently healthy.*—T\*\*\*, five years of age, was admitted into the hospital for children on the 4th of March, 1825. This child, though well-grown, was idiotic. According to the story of the parents, he had for three years been subject to violent pains of the head, and occasionally to attacks of vomiting. A common cynanche tonsillaris, for which advice had been sought a fortnight before, had yielded to a few leeches to the throat and common treatment. Since leaving the hospital, however, the child had been affected with a troublesome cough; he had been convulsed also; had vomited; and on the 13th of March, after his second admission, an eruption showed itself on the face, which was

<sup>20</sup> Medical Reports, vol. i.

<sup>21</sup> Sydenham. Op. cit. (in morbillis retrocedentibus).—Gendron. Gaz. méd., 1833, p. 275.

<sup>22</sup> Cazenave. (Journ. hebdom., t. iv. p. 75.)

<sup>23</sup> Rec. périod. de la soc. de med. de Paris, t. iv. n. 19.

<sup>24</sup> Descemet. (Rec. périod. de la soc. de med., t. vi. p. 419.)

<sup>25</sup> Thaer. (Rev. med., avril, 1829, p. 127.)

<sup>26</sup> Weller. Traité theor. et prat. des mal. des yeux, trad. franc.; par F. F. Riester, 2 vol. Paris, t. ii. p. 155.

<sup>27</sup> Home (F.). Op. cit.—Speranza. Bull. des sc. med., t. xv. p. 60.

<sup>28</sup> Tourtal. Gaz. méd., in-8, 1832, p. 8. (Soufre preservative de la rougeole.)

<sup>29</sup> Journ. compl. des sc. med., t. xli. p. 441.

<sup>30</sup> Lefort. Rech. sur l'origine de la rougeole, etc., in-4. Paris, 1806.

<sup>31</sup> Roux (Gaspard). Traité sur la rougeole, in-8. Paris, 1807.



held to be measles. 14th.—The eruption now covers the entire surface of the body; cough dry, pulse rapid, skin hot, eyes watery, bowels relaxed (*mucilaginous drink, cough julep.*) 15th.—(*The third day of the eruption.*)—Symptoms running high, bowels still relaxed; eruption bright, and confluent on the face. 16th.—Matters much in the same state. The thorax not examined this day, the child crying so bitterly when touched. In the evening the voice had become quite croupy; the pulse quick (*eight leeches to the fore part of the larynx, mustard plasters to the legs.*) 17th.—The leech-bites bled freely; still the respiration is exceedingly oppressed; diarrhœa continues; pulse weak and filiform, great prostration, the measly eruption still distinct, but pale (*two blisters to the legs.*) The respiration gradually became more difficult, the patient ceased to cough, and died about noon. *The body opened on the 19th.*—Traces of the eruption are still visible over the greater part of the surface of the body. The subcutaneous cellular substance and inner surface of the cutis do not appear injected. The form and consistence of the brain and cerebellum and spinal cord offer no peculiarity that could serve to account for the existence of the idiotic state. The upper part of the larynx was covered by a soft yellowish pseudo-membranous exudation; a small quantity of the same substance was also found about the lower part of the trachea, and first divisions of the bronchi. The mucous membrane of the larynx, trachea, and bronchi, was everywhere of a uniform violet-red hue. The lobes of the left lung were gorged; the middle lobe of the right lung was hepatized; the other two lobes were healthy. The heart was natural; the mucous membrane of the stomach was covered over by a thick mucus. The pyloric orifice was very narrow. A few rosy arborescent spots were found on the mucous membrane of the small intestines, which became more and more numerous as the ilio-cœliac valve was approached. The mucous coat of the large intestines was of a deep red colour, more especially about the sigmoid inflexure of the colon, and in the rectum. The mesenteric glands were red and enlarged; the other viscera seemed free from disease.

CASE XII. *Measles, pseudo-membranous bronchitis, pneumonia.*—L\*\*\*, fourteen years of age, about the beginning of the month of February, 1825, caught a slight cold. On the 15th, all the precursory symptoms of measles were apparent; weeping of the eyes, coryza, sneezing, cough, &c. 16th.—Great heat of skin, quickness of pulse, headache, anxiety about the præcordia, frequent and dry cough. 17th and 18th.—Same symptoms continue. 19th.—The eruption of measles appears over the face, the trunk and the limbs, in succession; crepitation, in a slight degree, in the lower third of the right lung; quickness and hardness of pulse, tongue red and dotted, frequent and noisy cough. (*Venesec. ad 3viii, mucilaginous drink, cough julep.*) 20th.—Paleness of the exanthema, frequent cough, scanty mucous expectoration; mucous rattle in the two lower thirds of the right lung; rather sonorous rattle in the upper third of the left lung; breathing short and very quick, pulse hard and very frequent. (*Venesec. ad 3xii, mucilaginous drink.*) 21st.—Cough less troublesome, respiration less oppressed; nevertheless, the rattle is heard over the same extent as yesterday; the eruption has disappeared, leaving no other trace of its former presence than some slight show of desquamation on the face; the tongue is white and less beset with red points. 22d.—The breathing is again more rapid; the patient, suddenly and at frequent intervals, suffers fits of great oppression; the rattle less distinct, and the respiration more obscure, in those parts of the lungs where it had hitherto been heard; almost complete absence of the respiratory murmur in the posterior and inferior parts of the right lung (*fifteen leeches upon this place.*) 23d.—Attacks of suffocation more frequent; orthopnœa, face slightly livid, lips blue, pulse 130 per minute, very small; death at five o'clock in the afternoon. *Examination of the body.*—Encephalon healthy; the mucous membrane of the pharynx, larynx, trachea and bronchi of a red colour, more remarkable opposite those points where the rattle had been heard during life; whitish membrane-like concretions, somewhat less consistent than the false membranes of croup, fill the ramifications of the bronchi, which are distributed to the two superior lobes of the lungs. Gorging and first stage of hepatization of the lower and posterior portions of the right lung, all the remaining parts of which crepitate. The left lung is crepitant, and adheres at the

top to the pleura costalis. The mucous coat of the stomach was of a dirty white colour. There were a few red spots towards the end of the ilium. The other abdominal viscera were sound.

CASE XIII. *Inoculated measles.*<sup>1</sup>—A child, seven months old, having a copious eruption on the head and a discharge from behind the ears, was inoculated the 21st of March, 1758. On the seventh day after the operation, the child began to be unwell; he was slightly feverish, had heat of skin, was restless, sneezed several times, but did not cough oftener than six or seven times in all, and had no affection of the eyes. On the 29th the eruption began to appear, and by the 3d of April the child was again quite well.

On the 6th of July, 1758, another child, eighteen months old, and of a very delicate complexion, was inoculated. *First day of the disease*, fever and dryness of surface; *second and third*, patient better; *fourth*, cough and sneezing during the day; slight nausea; *fifth*, some cough during the night, sneezing, great dryness of skin, anorexia; *sixth*, cough more troublesome, and sneezing; several patches of eruption appear in the morning, but they almost all recede. *Seventh*, the patches are very numerous over the ribs and on the thighs, where they are almost confluent. They are, however, more *distinct* than in natural measles; the eyes scarcely water; thirst; sneezing at long intervals; cough more frequent. *Eighth*, bowels relaxed. *Ninth*, purging gone; the patches disappear; neither cough nor sneezing.

## SCARLATINA.

Vocab. *Purpura; Rossalia; Morbilli confluentes; Scarlatina; Scarlet Fever.*

252. Scarlatina is a contagious exanthematous disease, which, after one or two days' continuance of fever, is announced by an eruption of small red points, which are soon replaced by large irregular patches of a scarlet or strawberry-red colour, extending to almost the whole surface of the body, accompanied by sore throat, and ending in desquamation to the end of the first week.

253. This disease presents several varieties of character in its symptoms, which may be referred to four principal forms: *scarlatina simplex*, *scarlatina anginosa*, *scarlatina sine exanthemate*, *scarlatina maligna*.

1st. *Scarlatina simplex*, Willan.—(*Scarlatina benigna et regularis*). First period (*incubation*). A sense of weakness and of general uneasiness, nausea, and transient chilly or shivering fits, speedily followed by heat of surface and a considerable degree of thirst, are the most usual precursory symptoms of the eruption. Headache, inclination to vomit, or actual vomiting, bleeding at the nose, drowsiness and other indications of affection of the nervous system, are occasionally experienced in addition. These first symptoms, which come on at any hour of the day, commonly increase in severity towards evening and during the night. (a)

2d. (*Period of eruption.*)—On the *second day* from the attack of the disease, which corresponds with the fifth or sixth of the infection, the face becomes swelled; small spots, not prominent, by no means of a very bright red at first, but subsequently of the most vivid hue, separated by intervals of the skin preserving its natural colour, appear in great numbers on the face, the neck, and the breast. Within twenty-four hours an eruption of the same kind is thrown out over the whole body, upon the lips also, the tongue, the palate, and the pharynx. On the *third day* the greater number of the interstices which have been mentioned as left between the small spots of the eruption, have disappeared, and are replaced by large dotted patches, irregular in their shapes, and ragged or serrated on their edges. The exanthema becomes continuous on the cheeks and limbs, surrounds the fingers, and acquires the scarlet colour which characterizes it. A few papular elevations most commonly arise at the same time on the hands, the chest and the extremities. The skin, which is much hotter in this

(a) I have seen a child sicken after a breakfast eaten with its usual appetite, be seized with vomiting at noon, and in the afternoon manifest a distinct scarlatina eruption.

<sup>1</sup> Home (F.). Medical facts and experiments, 8vo. London, 1758.



than in any other of the exanthematous diseases, is now burning, itchy, parched, and tender to the touch. Its surface, generally smooth, is in some places rough, like the skin of a goose—(*cutis anserina*),—a peculiarity especially remarkable about the outer and hind parts of the arms and thighs; the hands and feet, where the redness is commonly intense, are swelled, stiff and painful. The efflorescence of mild scarlet fever is rarely general; on the trunk it is in large patches, dotted as it were around their margins, and very various in their outlines. The scarlet colour is more vivid and more permanent about the groins, the buttocks and the folds of the articulations than on any other parts of the body. The eruption is less vivid in the morning than during the night, and is always deepest towards evening, especially on the third and fourth days. To make use of an expression of Huxham, the surface of the body appears to be strained with raspberry-juice, or dyed red. The fever commonly declines after the appearance of the eruption.

Third period.—On the fifth, and at latest on the sixth day, the eruption of scarlet fever begins to grow pale; the redness quits the parts affected in the same order in which it appeared; the puffing of the face becomes less, the interstices that separate the patches grow larger, and the colour of the latter fades. By the seventh day, the characters of the exanthema are already far from distinct. From the fifth day, slight desquamation, preceded by pruritus, takes place from the neck, the temples, and the chest. On the eighth and ninth, large pieces of cuticle are detached from the skin of the hands, fingers, feet, and other quarters of the body.

Before the eruption appears, and on its first breaking out, the pulse is full and frequent; the surface of the tongue is covered with a whitish fur, and its edges are red; the pharynx presents a dotted erythematous appearance; the tonsils are little swollen; sometimes the eyes are injected, sparkling, and humid; the sleep is disturbed and broken by dreams. These symptoms present a marked remission on the second or third day of the eruption; sometimes the tongue then throws off its coating, when its surface appears of the brightest red.

At this period, scarlet fever, of a favourable kind, often exhibits a rather remarkable phenomenon (*reversio*). After a febrile paroxysm, the skin is perceived to be covered anew with red spots, less numerous and of smaller size than those of the first eruption. This renewal of the disease does not continue long, and is terminated by a more or less copious perspiration.

The eruption of simple scarlatina sometimes takes place without any sensible precursory symptoms.

2. *Scarlatina anginosa* (*cynanchica*, Cullen).—The preliminary symptoms are more violent in this form of the disease than in the last. A sudden sense of stiffness in the muscles of the neck and lower jaw often ushers in the attack. On the second day, the fauces are inflamed, the voice is hoarse, swallowing is difficult and painful; the lining membrane of the mouth and fauces is of the same bright red as the general integuments. Some days, and often on the day after the attack, the anterior pillars of the velum palati, the tonsils and fauces become covered with a thick viscid fluid, or with flocculi of a pultaceous, gray, yellowish-white, or caseous-looking matter, similar to what is observed in certain cases of cynanche tonsillaris. These exudations, of various colours and consistencies, often form a kind of uniform coating over the fauces; they differ from patches of coagulable lymph, by being softer; they may also be scored with the point of a probe, and removed upon the end of the finger without pain. These pultaceous or curdy concretions are renewed from day to day; they often spread over the lateral parts of the pharynx and extend even into the œsophagus. I am not aware that any thing of the same kind has been observed after death, in the larynx and trachea. They have been called *aphthous crusts*, and have been erroneously supposed, by Fothergill and Huxham among others, to be eschars and ulcers. When the tonsils happen to be unequally swelled and to have bled a little, these incrustations are sometimes tinged of a brown or black colour, and put on the semblance of foul ulcers, in so much the more as the breath is then apt to become tainted. More attentive examination, however, shows that the pultaceous incrustation is very easily detached from the mucous membrane of the fauces, but never in masses or flaps, as in cynanche with exudation of coagulable lymph.

The parts once cleansed by gargles and mucilaginous drinks, never exhibit any loss of substance or any trace of ulceration, circumstances which both occur in gangrenous sore-throat.

On the second, third, and fourth days, the temperature of the skin rises to 41° and even 42° of the centigrade scale. The pulse also is then frequent, but not very full; the state of the mouth changes, the tongue is of a bright red, the papillæ very distinct; there are nausea, vomiting, diarrhœa or constipation, cough without expectoration, sneezing, coryza, guttural voice, and frequently hemorrhage from the nose, with some oppression of breathing.

The eruption does not generally appear so soon as in scarlatina simplex; it is often not visible before the third day, and does not spread so constantly over the whole surface of the body. It consists of isolated patches of a scarlet or raspberry colour, situated over the back, the flanks, the neck, the breast, and the limbs, and very regularly about the wrists. The eruption sometimes vanishes entirely on the very day of its appearance, and comes out again after an interval of longer or shorter duration. In this variety, the inflammation of the skin is very commonly attended with a decided tumefaction of the cellular tissue, especially in the face, and in the fingers, the flexion and extension of which are impeded. Lastly, the entire duration of the efflorescence is longer in this variety than in scarlatina simplex, and the subsequent desquamation less regularly performed; it is, indeed, scarcely appreciable when the eruption has disappeared suddenly, and when the exanthema has been very intense, is sometimes protracted beyond the third week.

Scarlatina *anginosa* may be complicated with pneumonia, or an affection of the brain, and thus become fatal. Secondary diseases are also more frequent after this form of the disease than after scarlatina simplex.

3. *Scarlatina maligna*.—Scarlatina sometimes occurs with symptoms of a still more formidable description. It commences like scarlatina *anginosa*, but in the space of two or three days is characterized by symptoms of extreme severity. Often, too, it is ushered in by a fixed pain in some part of the body, a phenomenon which De Haen observed to be of the very worst augury in the epidemic constitution of 1777–1778, described by Meza. To a violent shuddering fit (*horror*) succeeds a burning fever, unquenchable thirst, headache, quick and hard pulse, heat and pain of throat, vomiting and diarrhœa, coma or delirium, followed, three or four days after, by patches of eruption more raised than in scarlatina simplex, and sometimes accompanied by bloody urine.

The efflorescence in this variety is tardy in its appearance; its colour is pale or livid; it is sometimes mixed with petechiæ, its duration is indeterminate; it may appear and disappear once and again. The pulse is small and irregular; the teeth and tongue are covered by black or brown sordes; the eyes are watery and much injected; a fetid discharge is sometimes poured out from the nostrils; the cheeks are of a deep-red colour; there is at the same time deafness, in adults delirium, in children coma and jactitation; the breath is tainted, the breathing noisy and laborious, owing to the thick and viscid mucus adhering to the parts about the fauces; deglutition is difficult or impossible; there is constriction of the jaws, and a blackish exudation from the tonsils and neighbouring parts. Continual coma, extreme difficulty of respiration, copious diarrhœa, and the formation of numerous petechiæ, prognosticate speedy dissolution, which often takes place suddenly on the second, third, or fourth day.

The small number of patients who survive these first formidable symptoms, have now to contend with the consequences of inflammatory action in the air-passages and the digestive organs, which continues after the exanthema has gone, and with all the miseries of protracted illness. Gangrenous eschars often form over the trochanters and sacrum, which are followed by extensive ulcerated surfaces, whose cure, as it is difficult, prolongs still farther the period of convalescence. When any thing like chronic intestinal inflammation is going on at the same time, these sores are always serious, and sometimes fatal.

4. *Scarlatina sine exanthemate*.—In the epidemic scarlet fever of 1766, observed by Fothergill and by Huxham, it sometimes happened, in the cases of patients of a certain age, but very rarely in those of children, that after the most violent sore throat, there was no eruption, although the skin itched excessively, and desquamation, in various



degrees, afterwards took place. During the epidemic of 1788, observed by Rumsey, in Buckinghamshire, the soreness of throat was a symptom more invariably present than the eruption. Stoll, Aascow, Bang, Ranöe, and, very recently, an observer, as accurate as he is well-informed, Dance, have also attested the occurrence of these scarlet fevers without eruption. I have not myself seen any cases of the same kind; but, perhaps, this is owing to the rare occurrence of the complaint within the walls of the hôpital St. Antoine and de la Charité, where adults only are admitted, as well as to the difficulty of seizing every feature of a disease during its epidemic prevalence, necessarily experienced by him who is engaged with practice in a great city like Paris.

254. Whatever the form under which scarlatina shows itself, the eruption may be complicated with other inflammatory affections of the skin. From the fourth to the fifth day of the exanthema, there is often observed, upon the neck, the arm-pits, and sometimes on other parts of the body, an eruption of *sudamina*,—of small semiglobular vesicles, containing a pearly or transparent fluid, which is quickly absorbed, or flows out when the cuticle is ruptured; this is the *scarlatina miliaris* of Frank. Sometimes, too, pruriginous eruptions,—such as urticaria,—are observed at the commencement of the desquamation. Complications of scarlatina with measles, erysipelas, and the pustular inflammations, are more uncommon.

255. *Secondary diseases*.—During convalescence, from the fourteenth to the fifteenth day of the disease, and, occasionally, later, anasarca is apt to make its appearance; and this is a phenomenon which deserves to be particularly studied. The affection occurs most frequently during the winter season, and among children, in consequence of exposure to cold. Its approach is announced by a feeling of languor, of depression of spirits and peevishness, by want of sleep, and scanty and high-coloured urine, which often resembles the washings of meat. The face, and especially the eyelids, become swollen, and the œdema, spreading to the lower extremities, is not long of becoming general. All authors are of one mind as to the serious nature of this anasarcaous affection. According to Plenciz and De Haen, it is much more destructive than the primary disease; and these writers, as well as Stoerck and Withering, look upon the dropsical affection as a second period in the disease, and almost as one of its distinguishing characteristics. The affection is variously ascribed, by different authors, to the effects of cold, to an imperfect crisis, and to an affection of the kidneys.<sup>1</sup> Blackall and, more recently, M. Peischer, have shown that the urine was often albuminous during the continuance of the anasarca; and there is enough in these scattered remarks, when united, to make us inquire whether this species of anasarca be not really a variety of the dropsical affection lately made known by Dr. Bright, which Drs. Gregory and Christison have done so much to illustrate by new facts, and in the investigation of which I have myself spent some time.<sup>2</sup> In fact, like the disease described by Dr. Bright, the anasarca of scarlatina is almost always produced by exposure to cold and moisture. On the invasion of both diseases, a particular change in the qualities of the urine is often observed; this fluid becomes brown in colour, albuminous, and loaded with cruor. Both are very formidable affections; they both occasionally end in hydrothorax, and in hydrocephalus, and are very different from those passing dropsies proceeding from some obstruction to the current of the blood, the mechanism of which M. Bouillaud has so well explained. I have never had an opportunity of examining the organs, and particularly the kidneys, of an individual who has died from anasarca following scarlet fever, although I have very frequently had such opportunities in reference to the disease described by Dr. Bright. I observe no dissections of such cases among all those published by Dr. Gregory; but there is, during life, so perfect an identity in the phenomena of these two diseases, that *post-mortem* examination would, most probably, show them to be of the same nature. (a)

(a) Lesions of the kidneys from scarlatina are not as common as might be anticipated from the presence of anasarca and albuminous urine.

<sup>1</sup> Ueberlacher, Abhand. vom Scharlach Fieber, S. 378. Wien.

<sup>2</sup> Tissot. De l'hydropisie produite par l'affection graneuleuse des veins.—Paris, 1833, 4to. [Also Traité des Maladies des Reins et des alterations de la Secreion Urinaire, &c., avec un atlas, folio, tom. ii. 1839–40.]

As consequences of scarlatina, we also frequently observe inflammatory affections of the eyes, of the ears, of the bronchi, of the mucous membrane of the bowels, of the parotid glands, and of the testes in the adult, and swellings of the glands of the neck and groin in children; but these diseases are rather adventitious than secondary.

256. *Structural changes*.—When death has occurred on the second day from the invasion of scarlatina, I have found no more than a little redness in the mucous membrane of the bronchi; all traces of the eruption had disappeared. When death took place on the third day, the mucous membrane of the fauces, of the trachea, and of the bronchi, presented a uniform red tinge; the vessels of the brain appeared loaded, and the vascular reticulation of the pia mater was injected; the mucous covering of the stomach sometimes looked red, and was studded with slight ecchymoses. The lesions discovered during the second period of the disease, are very nearly the same, with this difference, that they are much more evident; I have found redness, and sometimes a collection of pus, in the tonsils and cellular substance beneath the mucous membrane of the upper part of the larynx; the mucous membrane of the trachea and bronchi was either red or of a uniform livid hue; the minute vessels of the cerebral and spinal pia mater were injected; their interstices occasionally presented slight ecchymoses, whilst the lateral ventricles were filled with serum. Sometimes, however, I have been unable to discover any lesion which could account for the symptoms of cerebral disturbance observed during life. The blood in scarlatina has been little examined. I do not know whether, as in measles, it possesses contagious properties. I have sometimes met with extraordinary evolution or swelling of the glands of Peyer, and, indeed, of the generality of the intestinal mucous follicles, as also with ecchymoses into the substance, and effusions of blood upon the surface of the mucous membrane of the stomach and intestines. I have, further, observed, but more rarely, effusions of blood or of purulent matter into the cavity of the pleura, which, in the rapidity of their evolution and progress, seemed to partake of the nature of the disease they accompanied. The mouth, the nasal fossæ, and the fauces, often exhibit the redness and changes proper to cyananche, with exudation of creamy-looking matter upon the surface. (a)

257. *Causes*.—Scarlatina is a contagious disease, but in a less degree than measles. Petit-Radel tried in vain to communicate it by inoculation, but we are told that Stoll succeeded in such an attempt; J. Frank tells us that it may be transmitted from the human subject to the lower animals,—as to dogs. Scarlatina principally affects children and youths; adults are more secure from its attacks; it very rarely happens that the same individual is affected twice. Out of two thousand cases, Willan did not know of a single instance of its recurrence. When the first edition of this work was published, I was in the same position myself, but since that time one case has come to my knowledge: a young man whom I had attended, several years before for scarlet fever, whilst recovering from pneumonia, in the treatment of which blood-letting had been employed to a great amount, contracted the disease through the ordinary channel of contagion.

All are not alike apt to be influenced by the contagion of scarlet fever; and every variety of circumstance is not equally calculated to make it efficient. It attacks females more readily than males. Some individuals, after having been exposed with impunity several days to the contagion of this disease, have been seized with it at a later period from simply coming into contact with persons who had visited patients labouring under the malady. Scarlatina almost always prevails as an epidemic, and most frequently about the period of the equinoxes. In winter it rages when the atmosphere is variable, damp, cloudy and cold, and at other seasons after heavy rains succeeded immediately by great heat.

The epidemic scarlatinas that have prevailed at different times, considered severally, have always a distinguishing character that approximates or seems to separate them from one or several others.

(a) Armstrong says that in nine cases out of ten the air passages are inflamed in scarlatina, and Mr. Hamilton, in his account of the epidemic as it appeared in Edinburgh in 1832, bears him out in this assertion.



Certain epidemic scarlatinas, for example, have been remarkable for their character of mildness. A fixed pain was one of the serious symptoms of the epidemics observed in 1777 and 1778, at Copenhagen, by Meza; a malignant scarlatina was described by Sennertus, in 1619, and the same form of the disease was prevalent in Saxony, in 1695 and 1697: Morton has left us an account of an epidemic scarlatina accompanied with buboes, and swelling of the parotid glands; the epidemic of 1748 and 1749 which occurred at the Hague, was connected with ulcerations of the throat and genital organs; in the epidemic of Upsal, 1741, described by Rosen, affections of the parotid glands were not held an unfavourable symptom; the epidemic observed in 1751, by Navier, at Chalons-sur-Marne, and that which was seen at Vienna, in 1770 and 1771, by De Haen and Kirchvogel, presented all the characters of scarlatina maligna.

Certain epidemics, however, have had a mixed or complicated character; such was the one described by Lorry in 1777. That observed by Stoerck, at Vienna, in 1759, was accompanied by a miliary eruption; the epidemic of Cephalonia, described by Angelo Zullato, was remarkable for its complication with bilious and wormy affections.

258. *Diagnosis.* Scarlatina differs from measles in its preursory symptoms, and by the scarlet hue of the eruption, the patches of which are much larger, whilst their shape is much more indeterminate. Neither do they, like measles, present those slight elevations circularly disposed and sensible to the touch. Scarlatina is further distinguished by the inflammation of the fauces that almost constantly accompanies it. In measles, three or four days before the eruption appears, the patient suffers from cold in the head, from sneezing, and a dry and hoarse cough; the eyes become moist and full of tears; in scarlatina the eyes are hot and inflamed, and the patients complain particularly of pain in the throat. Measles shows itself on the fourth day of attack, at first on the upper parts of the trunk, and extends gradually to the rest of the surface; the eruption of scarlet fever on the second day pervades the whole of the body. Measles most commonly leaves bronchial, ophthalmic and enteric affections behind it; anasarca more frequently follows scarlatina. According to M. Heim, scarlatina has a peculiar odour, which he compares to that which is felt in warehouses where old cheese is kept, or to that which at some distance is exhaled from the dens of lions and other beasts of prey. This odour is distinguishable from the very beginning of the disease, even before the appearance of the eruption. Measles has also its peculiar smell, which, from the invasion to about the seventh day, is bitter mixed with sweet; at a later period it becomes sourish, and precisely similar to that exhaled from the feathers of a goose stripped alive or recently killed. Scarlatina differs essentially, in many of its characteristics, from roseola, from erysipelas (231), and from erythema (221). The adventitious evolution of sudamina and of a few vesicles in scarlatina cannot render its diagnosis from sweating miliaria (*miliaris sudatoria*) difficult. In scarlatina, they are few in number, and only appear on certain regions; in sweating miliaria, they are scattered over the surface of the body generally. Lastly, the existence of a scarlet efflorescence of the skin suffices to establish a distinction between scarlatina and the inflammatory affections of the fauces with exudation of a creamy or pulsatious substance, observed in certain epidemics of scarlatina, and designated by Johnston, Withering, Stoll, and others by the name of scarlatina *without eruption*. M. Bretonneau has given an excellent account of the characters that distinguish the scarlatina maligna anginosa from angina or cynanche maligna, which he entitles *diphtheritis*. An extreme degree of derangement of the circulation, similar to that which follows on the bite of a viper, may be observed from the very commencement of scarlatina maligna; the rhythm of the respiration is not less affected; the functions of the alimentary canal are perverted, and excessive vomiting accompanies incessant diarrhoea; at the same time the disorder of the functions of the nervous system goes on continually increasing, and every thing foretells a fatal termination. The commencement of the cynanche maligna, or diphtheritis, is scarcely marked by the occurrence of febrile symptoms, or, at least, after a transient fit of fever, the pulse soon loses its frequency and returns to about its usual state. The organic functions generally, and those of voluntary motion particularly, are so little deranged, that children who are already dangerously affected by the angina maligna, display their wonted appetite for food

and continue at their play. Each of the phases of scarlatina is presented to our observation within the terms of a limited period; no term can be assigned to the successive stages of diphtheritis. Scarlatina, in its progress, has all the characters of a very acute disease; it may terminate in death on any of the days from the first to the seventh of the single week during which it is at its height (*status*); diphtheritic inflammation rather affects the chronic type, if the obstruction of the air-passages does not put a period to its continuance by causing the death of the patient. The inflammation of scarlet fever extends almost simultaneously to every part of the different mucous surfaces it invades; of an eminently local nature, it is from a single point that diphtheritic inflammation is propagated, with various degrees of rapidity, but successively, to the surfaces over which it spreads: thus whilst thick concretions, altered in their appearance, have already covered the tonsils and fauces for several days, we find, in the event of the patient sinking from obstruction in the air-passages, that the mucous membrane of the trachea and bronchi, and nasal fossae, are endued with concretions evidently of more recent dates. The inflammation of scarlatina shows little disposition to invade the air-passages; whilst diphtheritis exhibits this tendency in a very remarkable degree. In scarlatina, if the patient die within the first week, no anatomical lesion is to be detected of importance enough to account for the death; diphtheritis does not prove fatal, on the contrary, till the moment when the pseudo-membranous layers that line the air-tubes, either by their detachment or their accumulation, become a mechanical obstacle to the respiratory process; sometimes even asphyxia does not happen till many divisions of the bronchi are completely plugged up. No topical treatment, though it exert the most beneficial influence on the inflammation of the throat, abridges the duration or lessens the danger of scarlet fever; the first days of the second week bring about the desquamation of the skin, and convalescence of a more or less imperfect kind; and the patients who have reached a considerably advanced period of their recovery are not yet beyond the reach of change, nor yet safe from the ill consequences of the disease; they are still liable to be attacked with gangrenous ulceration of the skin, with convulsions, anasarca, œdema of the lungs, and numerous chronic affections, almost always accompanied by a remarkable change in the quantity of urine, which acquires a deep brownish-yellow colour, owing to an admixture of crassamentum. If, on the contrary, we succeed by local treatment, in modifying diphtheritic inflammation, the recovery of the patient is secured as soon as the local disease is at an end. The most fatal epidemics of scarlet fever scarcely cut off a fifth of the numbers attacked, whatever the mode of treatment adopted, and the mortality is generally much smaller; it is well nigh demonstrated that every one affected with angina maligna dies if the disease be left to its own course.

Let us add in reference to scarlatina as to measles, that the most important matter in a diagnostic point of view is to ascertain the measure and intensity of the affection that accompanies the exanthema, and the character of mildness or malignity of the prevailing epidemic. The greatest attention is required in examining into cases of scarlatina maligna. The delirium and other formidable cerebral symptoms seem often due to the violence of the inflammatory affection of the skin, of the fauces, or of some other organ; at times they appear to depend on congestion of the meningeal veins; but there are some cases where these phenomena, evidently independent of every kind of encephalic congestion, are still more serious and inexplicable.

259. *Prognosis.*—Scarlatina *simplex*, in a well-constituted subject, who has not recently suffered from acute or chronic disease of any kind, is without danger. A mild form of the disease may, however, become dangerous by the *retrocession* of the exanthema, occasioned either by a stimulating plan of treatment or exposure to cold. Epistaxis occurring at the moment of the eruption is reckoned a favourable symptom.

The extent and severity of the inflammation of the fauces and mucous membrane of the stomach and intestines, which so often precedes and accompanies the eruption, the character of the prevailing epidemic, and the pulmonary or cerebral affections which may supervene at different periods of its evolution, make the prognosis more or less doubtful according as these affections themselves prove severe and obstinate in their character.



In puerperal women scarlatina is commonly a serious affection. At the *Maternité*, M. Senn observed that pregnant women when first received into the hospital were seldom attacked by the disease, but that they very readily became affected by it after delivery.

260. *Treatment*.—In scarlatina *simplex* of a slight kind, the natural and regular course of the disease is favoured by the action of an agreeable and uniform temperature; spare diet is to be enjoined, diluents may be freely indulged in, and the foot bath used at night. In a strong and plethoric subject, if the heat of surface is very great, blood may be withdrawn from the arm. The patient ought not to yield to the inclination he feels to throw off the bed-clothes; and the room in which he lies is to be ventilated with caution. Neither ought he to quit his chamber or be allowed to leave the hospital until the thirtieth day.

261. In scarlatina *anginosa vel cynanchica*, gargling frequently with milk and water or some mucilaginous decoction, the detraction of blood from the arm, the application of leeches to the neck or epigastrium, of emollient poultices, in the form of a cravat, to the throat, and diluted sinapisms to the extreme parts, are generally useful measures. When perseverance in such steps does not seem longer allowable lest the natural course of the disease should be interrupted, we must have recourse to the application of a blister to the nape of the neck, and of cloths or sponges wrung out of cold vinegar and water to the epigastrium and those parts of the body where the heat is felt to be excessive.

Other methods of treatment have had numerous partisans. Currie, Withering, Bateman, Dr. A. T. Thomson and many other English physicians especially have boldly had recourse to cold affusion or the affusion of cold water in scarlatina. The patient is placed in an empty bath or washing-tub and one or two pails of cold water are poured over his head. He is then dried quickly, and again put to bed, where, should the cold continue, he should have little of some warm drink, or warm wine and water. In a few minutes the pulse becomes less frequent, the heat of surface declines, the thirst is less intense, tranquil sleep succeeds to the previous state of agitation, and is commonly followed by the breaking out of a sweat that proves of service. If the morbid symptoms recur, if the heat becomes pungent and very high, the affusion may be repeated with the effect of assuaging them again.

The fear of repelling the disease expressed by the patients or the bystanders has sometimes obliged the advocates of cold affusion, to be content with merely sponging the face, neck, chest, and extremities with cold water. The room should be ventilated at the time that the heat of the body is by this means reduced.

"We are possessed of no physical agent," says Dr. Bateman, "not excepting even the use of blood-letting in acute inflammations, by which the functions of the animal economy are controlled with so much certainty, safety, and promptitude as the application of cold water to the skin under the augmented heat of scarlatina. I have had the satisfaction in numerous instances of witnessing the immediate improvement of the symptoms and the rapid change in the countenance of the patient produced by washing the skin." (a)

(a) Long experience in scarlatina, and familiarity with this practice, induce me to coincide fully in the praises of the latter by Dr. Bateman. By no other remedy is the patient so speedily and pleasantly soothed and thrown into a refreshing sleep, as by cold or tepid affusion according to the heat of the skin and general excitement. The rules that ought to govern us in this practice, are well laid down by Dr. Thayer in applying it to the treatment of measles. I shall quote on this occasion from my work on *Baths and Mineral Waters*.

"The conditions for prescribing cold affusion in these cases were, 1. That the temperature of the body of the patient should be above 98° Fahrenheit, and that there co-existed restlessness and shortness of breath. 2. That the water for affusion should be colder in proportion as the body of the patient was hotter. Dr. Thayer was, in this respect, regulated by the table of Frélich which he always carried about with him, together with a small thermometer, the bulb of which he placed under the axilla of his patient. 3. That sponging or ablu-

Several English physicians have proposed to treat scarlatina by *purgatives* alone, affirming that they never produce the nervous symptoms, and the depression of pulse sometimes observed after bleeding. Willan employed calomel, in doses of two or three grains, combined in the beginning of the disease with the same quantity of antimonial powder. The same combination he informs us was freely administered by a physician, at Ipswich, in 1772, in large doses; and of three hundred patients thus treated none died.

To diminish the fever, heat and restlessness, the *tartrate of antimony* in emetic doses repeated every twenty-four or forty-eight hours has been recommended by some practitioners. A single exhibition of this or another emetic at the onset of the disease is a safe and, perhaps, a useful medicine; but such a mode of employing the remedy is supported neither by experience nor principle.<sup>1</sup> (a)

Two drachms of *chlorine* to eight ounces of water in the course of twelve hours has been extolled by Mr. Bathwite as a specific remedy. I have not myself tried any of these various medicines.

262. In scarlatina *simplex* and scarlatina *anginosa* complicated with violent inflammation of the stomach and intestines, of the larynx and bronchia, with cerebral or arachnoid congestions, &c., the activity of our antiphlogistic treatment ought to be in the ratio of the number and of the severity of these affections. At the onset they require general blood-letting, and the application of leeches to the throat, the epigastrium, and to whatever points the inflammation may have reached. Bleeding, however, either generally or locally is never to be carried so far as to produce the effects of a hemorrhagic condition of the system. Neither are we always to ascribe every case of delirium to inflammation of the brain or its membranes. Something must be left to the influence of time in this as in every other form of fever. We may next be called upon, as in the case of measles, to endeavour to restore the efflorescence of scarlatina by means of the warm bath and rubefacients, when it has disappeared in consequence of exposure to cold and moisture, and to give the eruption fixity, so to speak, by the agency of blisters when it comes and goes alternately. When this irregular progress of the disease is connected with paroxysms of internal irritation, as is most usually the case, the best way to fix the exanthema of the skin is to attack and subdue, if possible, these in-

tion was never to be resorted to when the little patient was in a tranquil state, or perspiring.<sup>2</sup>

"I shall here introduce the table of Frélich which will serve as a useful guide to direct the practitioner in the employment of bathing, and also as an apt illustration of the principles on which the remedial powers of the bath must rest. The greater the heat, and the higher the excitement, the colder is the water and the longer the period of immersion: a practice perfectly in accordance with the creed which admits the direct sedative power of cold, but contradictory and absurd, if we suppose with Currie and others the stimulating power of this agent.

Heat of the body by Fahr. Therm.	Temp. of the water by Fahr. Therm.	Duration in minutes of the Ablutions.	Baths.
98	90½	4	...
99½	85	4	...
100	75	4	1½ to 1
101	65 to 70	6	1 to 2
102	60 to 70	4 to 6	2 to 3
103	60 to 70	8	6 to 8
104	60	...	3 to 4
105	55	...	2 to 3
106	40	...	1 to 3
107	40	...	1 to 3
108	35	...	3 to 4
108½	35	...	3 to 4
109	35	...	3 to 4
110	35	...	3 to 4
111	35	...	3 to 4"

(a) An emetic at the beginning of the disease, and small doses of tartar emetic in its progress, where the pulse is active, is a part of a practice with which I have much reason to be pleased.

<sup>1</sup> Bateman, Synopsis, p. 77.

<sup>2</sup> North American Medical and Surgical Journal, Vol. VIII, p. 414, 415.



ternal disorders—a consummation which, unfortunately, is not always to be attained.

263. In scarlatina maligna, what therapeutic means can we hope to employ with success against delirium, and the effusion of blood into the textures of the stomach, the pleura, the meninges, &c.? Bleeding is almost constantly ineffectual; the pulse sinks with a rapidity that makes us despair, as in severe cases of dothineritis, the characteristic lesions of which are sometimes found on opening the bodies of those who die. On the other hand, the writers who have been loudest in praise of cold washing and cold affusion, tell us that in this form of the disease the remedy is of no avail. Ipecacuanha and tartrate of antimony by exciting vomiting sometimes expel the sanious phlegm accumulated in the fauces, and seem occasionally to restore the disease to a more regular type. Fumigations with vinegar, and decoctions of bark and contrayerva acidulated with simple oxymel or muriatic acid, or made pungent with the chloride of lime, or slightly stimulating by the addition of a small quantity of spirits, have very generally been recommended. Transient blisters, and sinapisms to the throat have also been held up as advantageous. Purgatives, too, and particularly calomel, in a dose of eight or ten grains, are said to have been more generally beneficial than any other means. I have not tried them myself; indeed, scarlatina maligna is a disease rarely met with, either in general practice or in the hospitals at Paris. (a)

According as the scarlatina *sine exanthemate* presents itself with the characters of simple or of complicated scarlatina, or with those of scarlatina anginosa or maligna, ought to be the variety of treatment pursued in regard to each particular case.

264. During convalescence, every possible precaution must be taken against the occurrence of anasarca. The patient must be put on his guard against exposing himself to cold; a tepid bath or two may be taken, and if the colour of the skin assumes a pallid aspect, frictions with dry and warm flannels, either unmedicated, or medicated with some aromatic or slightly stimulating powder or vapour may be practised.

When anasarca supervenes, either spontaneously or from some imprudence on the part of the patient, it ought to be attacked by general blood-letting, if the state of the constitution warrant such a measure, by the repeated use of the warm bath, by the acetate of potash in quantities of half a drachm daily, or by calomel in purgative doses.

265. Dr. Hahnemann,<sup>1</sup> having announced that during the epidemic prevalence of scarlet fever, those children and adults to whom belladonna was administered were preserved from the disease, although they had had communication with those who were attacked by it, the profession everywhere showed great anxiety to put this statement to the proof. In 1820, a violent epidemic scarlet fever having broken out at Gutersloh, none of the children to whom the extract of belladonna was administered were attacked;<sup>2</sup> the medicine was exhibited for a week. Hufeland has collected the reports of thirteen different German physicians who have tested and confirmed this opinion in regard to the preservative power possessed by belladonna against the attack of scarlet fever. M. Martini<sup>3</sup> also avows his faith in this virtue. M. Ibréliste, practising at Metz, saw twelve children preserved by belladonna from scarlatina which attacked two hundred and six, surrounded by whom they lived.<sup>4</sup> Dr. Velson administered this medicine to two hundred and forty-seven persons, of whom only thirteen contracted scarlatina. His formula was two grains of the extract in

two ounces of water, and two drachms of alcohol, a mixture of which from fifteen to twenty drops daily was exhibited. From the researches of Dr. Wagner, on the sum of the epidemics of scarlet fever in which belladonna has been prescribed, compared with others in which it was not employed, it follows that in the former the mortality was at most one in sixteen, whilst in the latter it was as high as one in three.<sup>5</sup> Whole villages kept themselves free from the epidemic by the use of the belladonna. Bernt recommends two grains of the extract to be dissolved in an ounce of cinnamon water, and during the prevalence of the epidemic, two drops of this solution to be administered night and morning to children of a year old, and to those farther advanced, one or two drops more than the number of their years. It may be urged that the continued use of belladonna during the course of an epidemic of long continuance might prove not unprejudicial. The effects of a medicine so active as belladonna, even in small doses, ought to be attentively watched. All the documents on the virtues of belladonna as a preservative from scarlet fever have been collected by Hufeland.<sup>6</sup> Schwarze, Cock,<sup>7</sup> and other practitioners have denied this preservative influence of belladonna entirely, which seems to require further confirmation.

Doctor Hahnemann discovered that belladonna sometimes produced a more or less fleeting redness of the skin, and dryness of the throat, homœopathic symptoms which, according to him, explain the peculiar properties of this medicine.

A combination in equal parts of yellow sulphuret of antimony and calomel<sup>8</sup> has been recommended as another preservative against scarlatina. The dose for children of from two to four years of age, is from a third to a quarter of a grain of the mixture added to a little sugar or magnesia; and this is repeated three or four times a day. (a)

In large towns, it is impossible to ascertain the numbers that may be attacked in the course of an epidemic scarlet fever. I have not, therefore, been in a position to undertake any experiments into the prophylactic virtues of belladonna, or of the mixture of sulphuret of antimony and calomel that has just been mentioned.

#### *Historical Notices and particular Cases of the Disease.*

266. Jos. Frank thinks that scarlatina, at least the scarlatina maligna, was known to the Greek and Arabian physicians, but the passages of Aretæus, of Aetius, and of Avicenna he refers to in support of this opinion are very obscure.<sup>9</sup> Ingrassias<sup>10</sup> was the first who, in unequivocal terms, gave the characters of this disease; he tells us it was known at Naples under the name of *Rossania* or of *Rossalia* previous to the year 1500. Forestus<sup>11</sup> ranks it among the *epidemic fevers*, and describes it under the name of *purpura*; Ballonius signalizes the epidemic that prevailed at Paris in 1581 under the name of *rubeola*, and John Coyttar,<sup>12</sup> a physician of Poitiers, appears to have seen it about 1557; since which epoch, the disease has been the subject of a multitude of observations and inquiries.

Numerous remarks have been published on the characters of scar-

(a) Dr. Sims states that the best preventive which he has met with, is a small dose of rhubarb; a few grains taken every morning so as to procure an evacuation in the course of the day.

<sup>1</sup> Journ. des progrès des sciences médicales, t. i. p. 242.

<sup>2</sup> Ueber das schützende Kraft der Belladonna gegen Scharlach Fieber, 8vo. Berl. 1826.

<sup>3</sup> Medic. Gazette, 1832, p. 530.

<sup>4</sup> Thomassen a Thuessink. Fats over de Voorbehoeding van de Rooderak. Groning. 1808.

<sup>5</sup> Aretæus. De morb. acut. lib. vii.—Ætius. Teirab. ii. serm. 4.—Avicenna, lib. iv. fin. 3, tr. 4-6. (Scarlatinam Hemekia id est betam rubram vocat?)

<sup>6</sup> Ingrassias. De tumoribus præter naturam, 1556, cap. i. p. 191: "Alteram verb idcirco Rossaniam nuncupant. Quoniam maculæ per universum corpus plurimè magnæ ac parvæ, ignitæ ac rubræ cum vix effatu digno tumore, instar nulla seorsum distincta erysipelata dispersæ sunt, ut totum corpus ignitum appareat. Si puer quidem febrilis, variolas antea passus sit, non eas at morbillos expectant; quod si utrumque horum præcesserit, jam Rossaliam timent."

<sup>7</sup> "Hic cum in febre maligna incidisset, diende etiam purpura correptus esset, non pustulas rubras easque latas instar morbillos habebat, quamvis ab iis non nihil distabant. (Foresti Obs. et cur. medic. chirurg. Rothomagi, in-fol., 1553, lib. vi. t. i. p. 258.)

<sup>8</sup> Coyttar (J.). De febribus purpuratis epidemics quæ anno 1557 vulgatæ sunt. Poitiers, 1578, in-4.

<sup>1</sup> Hahnemann (Samuel.) Heilung und Verhütung des Scharlach fiebers Nürnberg. 1801, in-8.

<sup>2</sup> Revue médicale, t. x. p. 213.

<sup>3</sup> Revue médicale, t. ii. p. 371. (Arch. gen. de med., l. v. 264.)

<sup>4</sup> Bulletins de la société médicale d'emulation, avril 1823, p. 201.



latina,<sup>1</sup> on several forms of this disease,<sup>2</sup> on scarlatina simplex and scarlatina sine exanthemate;<sup>3</sup> on scarlatina anginosa;<sup>4</sup> on scarlatina complicated with typhoid affections,—scarlatina typhodes,<sup>5</sup> with ataxic or adynamic symptoms;<sup>6</sup> with nervous symptoms,<sup>7</sup> with arachnitis,<sup>8</sup> with encephalitis,<sup>9</sup> with affection of the parotid glands,<sup>10</sup> with coryza accompanied by pseudo-membranous formations,<sup>11</sup> with severe diarrhæa,<sup>12</sup> with miliary eruptions,<sup>13</sup> with vesicular, pustular, or bullous eruptions,<sup>14</sup> with varioloid eruptions,<sup>15</sup> on the occurrence of scarlatina in puerperal women,<sup>16</sup> and in children during teething; on the secondary diseases of scarlatina, such as anasarca,<sup>17</sup> rheumatism,<sup>18</sup> and purpura;<sup>19</sup> on the diagnosis of scarlatina and angina maligna or diphtheritis;<sup>20</sup> on the alterations of the viscera consequent upon scarlatina;<sup>21</sup> on the recurrence of scarlatina.<sup>22</sup> The treatment of scarlatina has also been the subject of particular inquiries; we have remarks on the good and on the ill effects of blood-letting,<sup>23</sup> on the virtues of chlorine,<sup>24</sup> on the influence of cold affusion or cold washing,<sup>25</sup> on the use of emetics,<sup>26</sup> of purgatives,<sup>27</sup> and particularly of calomel.<sup>28</sup>

267. The following cases will show that varicella has no influence in interrupting the course of scarlatina; that purpura hemorrhagica is not always a serious complication, and that blood-letting is sometimes an ineffectual remedy in certain cases of scarlatina, accompanied with delirium, and complicated or not with pneumonia.

CASE XIV. *Scarlatina simplex, and vesicular varicella, running their course regularly.*—Adele Despreux, 16 years of age, has been vaccinated, and has never had either variola or measles. On the 15th of October, 1830, she complained of chilly fits, general uneasiness, lassitude, and great thirst, without cough, or any pain of the abdomen; she perspired freely in the night between the 17th and 18th. In the morning she complained of sore throat, and the eruption of scarlatina became apparent. The face, arms, and part of the legs, were of a crimson red, brightest on the outsides of the limbs, and

disappearing on pressure. The tongue is white and furred, the fauces painful, and of a livid-red colour; the tonsils look slightly swelled; evacuations from the bowels; chest sounding well, no cough; thirst, skin hot, pulse frequent.—(*Low diet, mucilaginous acidulated drink.*) 19.—The efflorescence is more vivid on the lower extremities, and a fresh eruption has come out on the face and trunk, where a great number of small vesicles,—VARICELLÆ,—isolated, and transparent on their summits are distinguishable. 20th.—The efflorescence of the scarlatina declines; the throat is less red and painful; the vesicles observed yesterday are more numerous, larger, and more inflamed at their bases. The scarlatina and chicken-pox ran their course naturally, and the patient left the hospital cured on the 27th of October.

CASE XV. *Scarlatina with hemorrhagic points; vesicular varicella evolved on the parts not occupied by the efflorescence of the scarlatina.*—Mandler, aged 24, admitted 18th October, 1829, had the scars of vaccine inoculation on the arms. Three days previously he had observed that his belly was of a red colour; he had not felt unwell, had had no soreness of throat or headache, and had not discontinued his work. 19th.—Pulse natural; slight heat of the skin, bright-scarlet colour of the whole anterior part of the trunk and upper half of the thighs; less intense efflorescence on the lateral parts of the trunk, where it appears as small close-set dots or points of the colour of a boiled fresh-water lobster; the eyes, the nose, the throat, are not at all affected.—(*Mucilaginous drink; spare diet.*)—20th.—The efflorescence has extended to the neck, the face, the arms, and legs; there are, moreover, some black or very deep-coloured spots, that do not disappear on pressure, scattered here and there; the throat and velum palati are, also, of a dotted and somewhat deep-red colour—(*same prescriptions*). 22d.—This day, over the arms, the upper part of the chest, the thighs, &c., wherever the efflorescence of the scarlatina had not been visible, there is an eruption of vesicular varicella, or chicken-pox. From this period nothing remarkable occurred; the scarlatina, petechiæ, and varicella went through their usual stages, and the patient left the house well on the 10th of November.

CASE XVI. *Scarlatina, petechiæ, and epistaxis; (purpura hemorrhagica) blood-letting; recovery.*—N. Duquesne, aged 24, having had small-pox when four years old, and measles when five.—On the 17th of January he complained of wandering pains in his lower limbs, of lassitude, and, for some days, has felt a distaste and disinclination to food; he is thirsty, and has violent headache, and some pain in the eyes, though the skin is not hot. 19th.—Same symptoms, and, in addition, pain and heat of throat, and a brightish efflorescence over the legs, which, on the few next succeeding days, spread successively over the thighs, the trunk, the arms, and the neck, the face alone preserving its natural colour. During all this time there was no complaint of nausea, nor of pain of the epigastrium, and the urine deposited a thick sediment.

25th.—The neck, arms, and anterior and posterior parts of the trunk, are covered with a raspberry-red efflorescence, which is more intense about the natural folds of the skin, and the projecting parts, such as the margins of the axillæ, the ham-strings, &c., as well as the districts habitually exposed to friction, such as the shoulder and buttocks, than elsewhere. The efflorescence appears stippled or in minute points, in parts abundantly supplied with follicles, but is nowhere disposed in circlets, as in measles; the scrotum is of the most vivid colour. Besides the eruption, a great many petechiæ are visible on the legs, which, by being joined, two or more together, sometimes form spots of a larger size; the anorexia and thirst continue; the tongue is of a violet-red colour, and the papillæ are very prominent. The whole lining-membrane of the mouth and fauces is of a scarlet colour, without any trace of pultaceous exudation; pain and heat of the fauces, deglutition difficult, darting pains in the nasal fossæ, and, during the last two days, clots of blood have been discharged from the nostrils. No very urgent symptom; respiration free, some dry cough, pulse full, conjunctiva slightly injected, eyes watery. 26.—Efflorescence declining, tongue bright red, and moist; epistaxis during the night.—(*Barley water for drink, broth.*) 27th.—Renewal of the epistaxis; bowels opened twice; desquamation on the forehead of the neck. The petechiæ and ecchymoses grow pale and turn yellow. 28th.—Cough, expectoration, hoarseness, tongue less fiery, appetite. 29th.—The

<sup>1</sup> Jahn. Journ. compl. des sc. m'ed., t. xxxvi. p. 387;—t. xxxvii. p. 149.

<sup>2</sup> Suebel. Bullet. des sc. m'ed. de Ferrussac, t. xii. p. 319.—Armstrong. Pract. Illust. of the Scarlet Fever. Lond., 8vo., 1818.

<sup>3</sup> "Angina cum febre, sine eruptione, minus semper periculosa, quarto vel septimo morbi die, largâ salivatione, hæmorrhagiâ narium, sudore, vel etiam abcessu ad aures finiebantur (Aascow. Obs. pract. de scarlat. epidem., anno 1777 et 1778.—Act. soc. Havn. vol. ii. p. 99, § xi).—Bang. Act. soc. Havn., vol. ii. p. 83.—Eichel. *Ibid.*, p. 32.—Collins. Med. communic., vol. ii. art. 22, p. 363.

<sup>4</sup> Withering. On the Scarlet Fever and Sore Throat. London, 1779.—G. Pistorlet. Diss. sur la scarl. angineuse qui a régné epidémiquement à Langres en 1801, in-8, Paris.—Lanthiez. Diss. sur la scarlat. qui a régné epidémiquement à Boralle en 1819, in-4, Paris.—Trousseau. Arch. gen. de med., t. xxi. p. 541.

<sup>5</sup> Rut. Journ. hebdom., t. vi. p. 55.

<sup>6</sup> Weber. Journ. hebdom., t. v. p. 86.—Guernset. Lanc. franc., t. v. p. 221.

<sup>7</sup> Broutais. Gaz. medic. 1831, p. 200.

<sup>8</sup> Parent-Duchâtelet. Traité de l'arachnitis, p. 34, in-8. Paris, 1821.

<sup>9</sup> Kreysig (F. Ludw.). Abhandlung über das Scharlachfieber, etc., in-8. Leipzig, 1802.

<sup>10</sup> Tissot. De cynanche purpuro-parotideæ.—Lemercier. Epid. de scarl. compliqu. de parotides. (Rev. med., t. v. p. 435.)

<sup>11</sup> Journ. des hôp., in-fol., p. 313.

<sup>12</sup> Johnston. Mem. of the Med. Society of London, vol. iii. part 16.

<sup>13</sup> Lorry. Mem. soc. roy. de med., t. ii. p. 134.—Chomel. Lanc. franc., t. v. p. 89.

<sup>14</sup> Stark. Ann. med. secund., p. 46.—J. P. Frank. De cur. homin. morb.

<sup>15</sup> Revolat. Lanc. franc., t. v. p. 411.

<sup>16</sup> Malfatti.—Hufeland's journal, xii. B. 3 St., p. 120.—Senn (L.). Sur la scarlatine puerperale, in-4. Paris, 125.

<sup>17</sup> Sennert. De febr., t. iv. cap. 12.—Vieusesux. De l'anasarque à la suite de la scarlatine (Journ. gen. de med., t. vi. p. 378-401).—Meglin. Memoire sur l'anasarque à la suite de la fièvre scarlatine (Journ. de med. chir. janvier 1811).—Blackall (J.). Obs. on the nature and cure of Dropsies, 8vo. Lond., 1818.—Peschier. Urine albumineuse après la scarlat. (Journ. de chim., t. vii. p. 10.)

<sup>18</sup> Murray. On a species of rheumatism consecutive to scarlet fever (Med. and Surg. Journ. of Edinb., v. xxxiii).

<sup>19</sup> J. Paul. (Med. and Surg. Journ. of Edinb., v. xxxvii. p. 28.)

<sup>20</sup> Perkins (W. B.). Essay for a Nosological and Comparative View of the Cynanche Maligna and the Scarlat. Anginosa. London, 1787.—Bretonneau. Arch. gen. de med., t. xiii. p. 29.

<sup>21</sup> Dance. (Arch. gen. de medec., t. xxiii. p. 321-401.)

<sup>22</sup> J. Frank. Præxos. med. univ. præcept., vol. ii. part i. p. 256.

<sup>23</sup> Dance. Ut sup. (advantages).—Marbeck. Bull. des sc. med. de Ferrussac, t. xx. p. 62. (Inconveniences.)

<sup>24</sup> Bathwite. Of the utility of oxygenat. muriatic acid in the cure of Scarlet Fever. (Ann. of med., for the year 1803, p. 487.)

<sup>25</sup> Currie (James.). Medic. Reports on the effects of Water, cold and warm, as a remedy in Fever and other diseases, 8vo. Liverpool, 1798.

<sup>26</sup> Stoll. Rat. med., part ii. 171-361; part iii. p. 5-6.

<sup>27</sup> Strach. Hufeland. Journ. der prakt. Heilkunde, xix. B. 2 St. 132 (before and after the eruption).—Hamilton. Op. cit.

<sup>28</sup> Hufeland. Journ. der prakt. Heilkunde, xii. B. 2 St. p. 86;—vii. B. 2 St. p. 77;—xvi. B. 1 St. p. 24.



redness no longer visible; the ecchymoses of the legs are of a greenish-yellow colour; the epistaxis recurs again, and more abundantly than before. Cough and hoarseness continue.—(Same plan.) From January 29th to February 9th.—Desquamation goes on over the whole surface of the body. February 9th.—Renewed epistaxis, cough, rather severe headache, pulse strong and full (Venes. ad 5xii.)—10th and following days. Better; all symptoms of the malady now disappeared, and the patient was dismissed cured on the 14th.

CASE XVII. *Scarlatina anginosa; circumscribed pneumonia; delirium; death.*—Daynal, 16 years of age; had been vaccinated, and never had either measles or scarlatina. Five days before his admission into hospital on the 12th of September, 1829, he had been seized with coryza, sore throat, headache, fever, and diarrhoea, for which several leeches had been applied to the neck. The skin was of a very vivid-red colour, which disappeared on pressure, over the abdomen and lower extremities. On the breast and upper extremities the efflorescence was stippled, and of a pale-red colour, as if it were already declining on these parts; the tongue and posterior fauces were red like the skin; the tonsils so much swelled that they touched; pain in the bowels, liquid dejections. In the evening, delirium and great agitation; the tongue dry, pulse frequent and full, heat of surface intense.—(Twenty leeches behind the ears, mucilaginous drink.) Delirium less, and not so incessant; the patient knows the bystanders; cough, hissing and crepitating rattle at the posterior and inferior parts of both lungs.—(Venes. ad 5xii, cough mixture, mucilaginous drink; low diet.) Blood strongly buffed, delirium continues, tongue parched, no stool. The leeches bled a great deal; death at 2 o'clock in the morning [of the 15th]. Dissection thirty-two hours after death. The abdominal viscera present no remarkable appearance. The lungs, gorged with black blood, crepitate throughout their whole extent, except in one small circumscribed point in their posterior part, where the tissue is hard and hepatized, and from which the blood does not flow freely as it does from other parts when they are incised. The mucous membrane of the bronchi is a little redder than it ought to be. There was a tablespoonful of serum in the ventricles of the brain, the structure of which appeared healthy. The left tonsil contained a little pus, the heart was hard, red, and enlarged.

CASE XVIII. *Scarlatina, delirium, blood-letting, death without any serious alteration of the solids.*—A. Proukis, 27 years of age, of a healthy constitution, has been unwell several days; her child, 8 years old, had but just died of the scarlet fever. On the eighth day, she herself felt very unwell and kept her bed. Next day, a dotted efflorescence appeared over the body, with pain in the throat and epigastrium, vomiting, purging, and delirium.—(Venesection, leeches to the epigastrium.) 21st of May, 1830.—Skin hot, of an uniform red colour, as if it had been stained with raspberry juice, but less intense on the face and legs; pulse full and frequent, throat painful and swollen, tongue of a crimson red; tonsils enlarged and of a deep livid hue, which extends into the pharynx, and over the velum palati; thirst, sickness, epigastrium painful, diarrhoea, chest free, agitation, low delirium. 22d.—Night restless, the patient moans, epigastrium painful.—(12 leeches behind the ears, 20 to the epigastric region; sinapisms to the feet.) 23d.—The leeches bleed freely, the delirium continues; no amendment; the eruption is paler.—(16 leeches behind the ears, lavements, sinapisms to the feet, mucilaginous drink, low diet.) Death during the night. Dissection 30 hours after death. The stomach has a few livid marblings; its mucous membrane is natural in consistence and thickness. The glands of Peyer, towards the extremity of the small intestines, are well marked, prominent, show some black dots, and are surrounded by a little redness; no particular redness, and no ulceration in the intestines; no enlargement of the lymphatic abdominal glands; a small quantity of serum in the pleuræ, without signs of inflammation, false membranes, &c.; heart natural; the blood is black, fluid, and contains some bubbles of air; the tonsils are double their usual size, and injected; the brain and its dependences are healthy.

## ROSEOLA.

Vocab. *Rash* [Rose Rash], *Measles*—false Eruption—anomalous rosy Efflorescence—*erysipelatus Rubecula, Roscola.*

268. In the first edition of this work, I followed Willan in describing, under the name of Roseola, several eruptions, acute in their nature, not contagious, transitory, and characterized by red spots, variously figured, slightly, or not at all, prominent, and usually preceded or accompanied by febrile symptoms.

Farther experience has since satisfied me that it was impossible to distinguish several species of roseola from erythema; moreover, I at one time instituted serious inquiries with a view to ascertain whether another variety, the spots of which greatly resemble those of measles (*roseola infantilis*), and which forms the principal type of this group, was not itself a mere modification or a variety of measles without catarrh. But my facts are not sufficiently decisive, nor is my mind yet sufficiently made up to allow me to destroy the group formed by Willan, under the title of roseola. At all events, the following may be taken as the characters of the various eruptions he has characterized by this name, the existence of which is not to be disputed, were they ever so variously designated, or ever so differently arranged in different nosological schemes.

1. *Roseola æstiva.*—This variety, which is sometimes preceded by slight fever, appears first on the arms, the face and the neck; within the space of a day or two it spreads to the rest of the body and causes tingling and severe itching. It appears under the form of small distinct patches, larger, paler, and more irregular than those of measles, separated by numerous intervals where the skin preserves its natural colour. Of a lively red at first, they soon acquire the deep tinge that is proper to them. The pharynx exhibits the same hue, and the patient feels a sort of roughness and dryness when he swallows. The eruption still continues bright on the second day; immediately after which it begins to decline, slight patches of a dull red continue to the fourth day, and disappear entirely on the fifth along with the constitutional disturbance.

At times this efflorescence, limited to certain parts of the face and neck, and the upper part of the breast and shoulders, shows itself under the form of very slightly elevated patches, which cause violent itching, but without the sense of prickling that accompanies urticaria. The disease lasts at most a week. The eruption occasionally appears and disappears again and again, without any perceptible cause, or in consequence of violent moral affections, or after the ingestion of spiced food and heating liquors. The recession of the efflorescence is usually attended by derangement of the functions of the stomach, by headache, a state of languor and of lassitude, which the recurrence of the eruption causes immediately to cease.

This variety of eruption usually occurs during the summer in females of irritable constitution; it is sometimes connected with the intestinal affections of the season; it seems to form a kind of a middle state between erythema and urticaria, and requires to be treated by moderate abstinence, acidulated drinks, [when these do not disagree] and occasionally by gentle laxatives.

2. *Roseola autumnalis.*<sup>1</sup> This variety attacks children in the autumn, and shows itself under the shape of distinct circular or oval spots, of a dusky red colour, which gradually increase in extent till they have attained the size of a shilling, or something less. They appear principally on the arms, and sometimes end by desquamation; this eruption is not accompanied by any great amount of uneasy feelings or of pruritus. It is evidently a variety of erythema.

3. *Roseola annulata.* This species is sometimes accompanied by febrile symptoms: its duration then is brief; in other cases, there is no disturbance among the functions generally, and the eruption continues during an undetermined period. It appears on almost every part of the body under the form of rosy rings, the central areas of which are of the natural colour of the skin. These rings are not at first more than a line or two in diameter; they enlarge gradually and are sometimes at last an inch and a half in circumference. In the

<sup>1</sup> Dr. A. T. Thomson quotes two cases from Bateman, which he refers to this variety, and which were attended by very serious febrile symptoms. Vide his Ed. of Bateman's "Pract. Syn." 8vo. London, p. 143.



morning the efflorescence is always less vivid. When chronic it has a sallow and discoloured appearance; it revives towards evening or during the night, and causes a sensation of heat, itchiness, and tingling in the skin. If it vanishes or fades, the stomach becomes disordered, languor, vertigo, and pains of the limbs, are complained of, symptoms which are generally assuaged by the tepid bath. When the eruption becomes chronic it should be treated by sea-bathing and the use of the mineral acids.

The description of this variety must be ultimately blended with that of the *erythema annulatum*.

4. *Roseola infantilis*.—In this variety the spots have smaller intervals of sound skin between them than we observe in *Roseola æstiva*. When the eruption is general, if the appearance of the disease be the only element considered in laying down the diagnosis, it is very apt to be confounded with *common measles*.<sup>1</sup> This variety of roseola attacks children when teething, or it supervenes in the course of their intestinal and febrile affections. Sometimes it only exists for a single night; or it comes and goes successively during several days, accompanied by some disturbance of the principal functions. It may also occur in succession on different parts of the body.

Whether this variety be a modification of rubeola, or be independent of that disease, it ought to be considered as the type of the group *roseola*.

5. *Roseola variolosa*.<sup>2</sup>—This exanthema sometimes occurs before the eruption of the natural or inoculated small-pox, preceding the former more rarely than the latter, in which, indeed, it is calculated to appear about once in fifteen cases, in the course of the second day of the eruptive fever, which corresponds with the ninth or tenth day after the inoculation. The efflorescence is first perceived on the arms, the breast and face, and on the following day it extends to the trunk and extremities. Its long, irregular, and diffused patches leave numerous intervals between them. More unfrequently this variety of roseola is characterized by an almost generally diffused efflorescence, slightly prominent in some points. It lasts about three days; on the second and third, the variolous pustules may be distinguished amid the roseolar efflorescence by their roundness and prominence, their hardness, and the whiteness of their summits; as soon as they appear the roseola declines. This variety of roseola has been regarded, by several inoculators, as announcing an eruption of distinct small-pox. My observations on natural small-pox, like those of Walker,<sup>3</sup> lead me to think precisely the contrary.

The eruption of roseola variolosa is, with difficulty, repelled by exposure to cold, or by cold drinks. By the earlier writers on small-pox it was mistaken for measles; a circumstance that led them to conclude that measles was sometimes turned into small-pox.

*Roseola variolosa* may be very readily connected with erythema.

6. *Roseola vaccina*.<sup>4</sup>—This efflorescence is observed to occur in several children from the ninth to the tenth day after the insertion of the vaccine poison. It comes out as small confluent patches, and sometimes diffused like those of the variolous roseola, and appears about the period when the areola is formed around the vaccine vesicle, from whence it extends irregularly over the entire surface of the body; it is not, however, so general an occurrence as the efflorescence that follows the inoculation of small-pox. It is commonly accompanied by acceleration of the pulse and great anxiety.

7. *Roseola miliaris*.—Willan tells us that this variety often accompanies an eruption of miliary vesicles with febrile symptoms.—I have not met with it in any practice.

8. *Roseola febrilis*.—In continued and typhoid fevers Bateman has observed an efflorescence making its appearance, resembling roseola æstiva, or measles. He saw this roseola occur three times at the close of slight fever. In two of these patients, the eruption only lasted two or three days; in the third it appeared on the ninth day of the fever, after a deep sleep and a gentle sweating fit. The spots, of a

bright rose-red colour, of an oval shape, slightly prominent, and smooth on their surface, thrown out on the arms and the chest, were more particularly numerous on the inner sides of the arms. The eruption was attended by no pruritus, nor any other sensation. The febrile symptoms all subsided on the same day, and the patient no longer kept his bed. Next day the efflorescence had spread; the spots had become broad and confluent, and their colour, which was weakened, especially towards the centre, had acquired a purple tinge, whilst the margins still continued red and slightly elevated. On the third day, the whole of the patches had a tendency to become livid, and on the fourth, there was scarcely a trace of them remaining, or any symptom of febrile excitement to be observed.

This variety of roseola might be described under the head of erythema, with perfect propriety.

9. *Roseola rheumatica* [*et arthritica*].—A roseolar form of efflorescence is sometimes connected with attacks of gout and acute rheumatism. Bateman attended an individual of a gouty habit, in whom a roseola, accompanied by violent fever, extreme languor, complete anorexia, and constipation, appeared upon the lower extremities, the forehead and scalp for the space of a week. The efflorescence ended on the seventh day in desquamation, and in the middle of the night the articulations of the right foot were attacked by gouty inflammation. I have seen roseola patches occur towards the end of a rheumatic seizure. Case XIX. Dr. Schönlein<sup>5</sup> has also described this variety under the title of *pelliosis rheumatica*, and assigned it the following characters: pains of the articulations and extremities, of greater or less severity, remitting, changing their place, increasing from the influence of cold, and becoming easier from the warmth of the bed; shivering fits, followed by more or less marked febrile reaction, with quickening of the pulse and increased heat of skin, which is dry.

Slight gastric symptoms with loss of appetite, clammy state and bitterness of mouth, and furred tongue are the precursors of the disease. Twenty-four or forty-eight hours afterwards, and often later, a particular eruption makes its appearance, always commencing on the legs, and sometimes going no further, but most generally coming out on the arms and shoulders at the same time: it rarely appears on the trunk, and never on the face. This eruption consists of small isolated spots, of a round shape, of the size of a millet-seed or small lentil, rarely prominent, and of a deep, or violet, sometimes blackish-red colour. The number of these spots is very variable; most generally they are neither so numerous nor so closely set as the vesicles of miliaria, or the spots of measles. The fever ceases, and the rheumatic pains either leave the patient or diminish greatly in their severity from the moment this eruption appears. Under the influence of appropriate regimen and treatment, the little spots, whose numbers may be increased by successive crops, grow pale, and the disease ends by a furfuraceous desquamation. If the course of this exanthemata is interrupted, whether by the influence of exposure to cold and moisture, or by the application of discutients, the spots disappear immediately, the rheumatic pains return in increased severity, the joints swell, motion becomes intolerable, and fever is again set up.

This disease, observed at Würzburg, where rheumatic affections are almost endemic and frequently fatal by being complicated with miliaria, attacks adults and males more frequently than females. M. Fuchs says that it is during winter and spring, when the atmosphere is cold and loaded with moisture, that he has most frequently seen this eruption.

The plan of treatment pursued at the hospital of Würzburg, consisted in the administration of tartrate of antimony when there were symptoms of gastric derangement; in the exhibition of the vinum colchici when the rheumatic pains were severe, and the use of diaphoretics, such as the acetate of ammonia and compound powder of ipecacuanha to favour the eruption. Tepid and soothing drinks alone were permitted; the regimen was simple and antiphlogistic.

Petzold,<sup>6</sup> Nicholson, and Hemming<sup>7</sup> have also met with arthritic roseola. And, to conclude, Dr. Cock<sup>8</sup> has particularly described an

<sup>1</sup> Underwood is of opinion that this error has been often committed. (On the diseases of children, vol. i. p. 87.)

<sup>2</sup> Dezoteux and Valentin have described the *roseola variolosa* under the title of *eruption anormale rosacée* (Tr. hist. et prat. de l'inoculat. 8vo., p. 238).—Baron Dimsdale has given many cases of roseola in consequence of inoculated variola (vide Present method of inoculating for the small-pox, 8vo. Lond.).

<sup>3</sup> Inquiry into the small-pox, 8vo. Edinb. 1790, chap. 8.

<sup>4</sup> Pearson. Observ., &c., in Lond. Philos. Magaz., Jan. 1809.

<sup>5</sup> Fuchs. Sur le Pelliosis rheumatica (Bullet. des sc. méd. de Feruss., t. xviii. p. 274.)

<sup>6</sup> Petzold. Obs. med. chir., no. 9.—Nicholson. Lond. med. gaz., v. iii. p. 546.

<sup>7</sup> Hemming. Beyträge zur prakt. Arzneykunde, 2 B.

<sup>8</sup> Cock. Obs. on the epid. eruptive rheumatic fever of the West-Indies (Edinb. Med. and Surg. Journ., t. xxxiii. p. 43).



"epidemic eruptive rheumatic fever" which he saw in the West Indies.

10. *Roseola cholericæ*.<sup>1</sup> I saw this variety during the epidemic prevalence of cholera at Paris, in 1832. After the period of reaction, there occurred in some patients, especially in women, an eruption which most generally appeared on the hands and arms, and then extended to the neck, the breast, the belly, and the upper and lower extremities. At its commencement it was characterized by patches for the most part of an irregularly circular shape, of a bright red colour, elevated above the surface, and but slightly itchy. Very numerous on the hands, arms, and chest, they were less so on various other parts; in some places they were crowded together, tended to confluence, and had an appearance very analogous to the efflorescence of slight scarlet fever; in other places the aspect of the eruption was rather like that of measles, and in others even more like that of urticaria.

I have seen this inflammation complicated with an inflammatory affection of the fauces or tonsils, and its disappearance followed by an aggravation of the general symptoms, and sometimes even by death. On the chest the spots occasionally became confluent, and gave rise to patches as broad as the hand, raised above the general level, and pretty well defined. The eruption then acquired a dirty pink or rose colour. About the sixth or seventh day the epidermis cracked and was thrown off in large flakes, on almost all the places where the eruption had existed.

#### *Historical Notices and particular Cases of the Disease.*

296. I have already pointed out the principal treatises upon roseola in speaking of the varieties of this efflorescence. Orlov,<sup>2</sup> Seiler,<sup>3</sup> Heim,<sup>4</sup> and Stromeyer<sup>5</sup> have devoted themselves to pointing out the characters that distinguish it from measles and scarlatina. It is not so easy to establish a line of demarkation between roseola and erythema. No one, indeed, can confound papular erythema without fever, confined to the hands, and its prominent and distinctly circumscribed patches, with the more or less diffused, not prominent red spots of roseola, spread over almost the whole surface of the body, and appearing after a febrile attack analogous to that of eruptive fevers generally. But if a certain number of particular cases of roseola and of erythema be compared, various points will be discovered at which these two diseases meet and run into each other. Let but erythema become somewhat more general than wont, and its spots appear a little more prominent, or the patches of roseola, from some unusual violence of the accompanying inflammation, become particularly prominent, and the appearances of these two exanthemata are the same. So, the eruptions that accompanied cholera on their first appearance presented several characters that approximated them to the erythema papulatum; these, however, were soon lost, for others held pathognomonic of roseola. Lastly, roseola annularis and roseola autumnalis, which appear as chronic affections, ought evidently to be classed with erythema.

Sydenham<sup>6</sup> thought that *roseola* was a variety of *rubeola* or measles; others have imagined that there subsisted between these two affections the same relation as we trace between *variola spuria* and *variola vera*; whilst a third party<sup>7</sup> have endeavoured to prove that roseola typified a particular morbid condition distinct from all the other exanthemata.

CASE XIX. *Articular rheumatism, erythematous or roseolous eruption; muco-enteritis and bronchitis.* Marie Hautefeuille was seized, on the 7th of January, 1833, after a hard day's work, with shivering fits, which proved the prelude to a general rheumatic attack. She was treated by bleeding and the tincture of colchicum. On the 26th and 27th a *roseolar eruption* appeared on the fore parts of the breast

and abdomen, and over the lumbar region, of which four or five round and well-defined patches did not disappear completely with pressure. Upon the abdomen there is a reddish festooned or wavy zone which extends obliquely from the left hypochondrium to the vicinity of the spinous process of the illium; the lower edge of this zone is sharp and well defined; the superior is gradually lost in the healthy skin. The festoons of the lower edge are of unequal breadth. The patient neither complains of heat, itchiness, nor pain in the seat of the eruption, circumstances that sufficiently distinguish it from urticaria.

On the 28th, the rheumatic and general febrile symptoms recur with new intensity; the eruption has gone from the breast, and faded on the abdomen. 29th.—Profuse perspiration, which gave relief; the eruption disappeared from the abdomen. In the night of the 2d of February, the patient wandered, moaned, seemed drowsy, and complained of severe pain in the wrists; constipation during the last three days,—(*blisters to the forearms*). From this time forward, the rheumatic pains and fever went on declining; and the patient, after another relapse of her rheumatism and an attack of diarrhœa, left the hospital on the 25th recovered.

CASE XX. *Cholera, roseola following reaction; recovery.*—Bougal, aged 43 years, had suffered from cholera for eight days, from the cold or collapsed state of which he had hardly recovered when he was admitted into La Charité. Reaction to a greater extent was excited by a few spoonfuls of Malaga wine, and sinapisms to the extremities; and within a day or two symptoms of greater vigour were manifest.

On the 21st, an eruption appeared over the whole body, but especially on the belly and on the limbs. It is disposed in rather broad patches of an irregularly round form, and a deepish-red colour, not raised above the general level of the skin, and presenting all the characters of roseola; in some places the efflorescence is uniform, and resembles a little that of scarlatina; on the breast, however, it is exceedingly like measles; in other respects the patient's state is satisfactory, the eruption is attended by no disturbance of the general functions, and by the 27th, when the patient was quite convalescent, it had vanished without inducing desquamation.

Many instances of this kind were observed in the wards of La Charité. Two of Dr. Lherminier's patients and three of Dr. Rullier's were affected during the period of reaction in a very similar manner.

CASE XXI. *Roseola (rubeola spuria?).*—Whilst dressing G. L., aged 4 years, on the 19th of June, 1825, the nurse observed his face covered with small red spots, without elevation of the skin, and very like measles in colour. Not only were these spots evident at the period of my visit the same day, but others were distinguished on the breast and arms. The child had no fever, had slept well through the preceding night, and was playing as usual; yet the tongue was foul towards the base, and much dotted; the appetite too had fallen off for several days, and the bowels were constipated. Pressure on no part of the abdomen caused pain; the throat was not inflamed, and there was no cough or preternatural flow of tears. Two years previously I had attended this boy and his two brothers for well-marked measles, a circumstance which, considered along with the absence of several of the characteristic symptoms of measles, made me look on this slight eruption as nothing more than roseola, or the false measles of authors—(*gum-water and soup for diet*). The child slept quietly; by the 21st the efflorescence was pale; and two days after it was no longer visible; a day or two more of perseverance in the same regimen restored the appetite to its usual condition.

CASE XXII. *Roseola (spurious or modified measles?).*—I was called to see a child, 10 years of age, in the beginning of August, 1825, about 24 hours after the appearance of an eruption of small, distinct, not elevated spots, broader and more irregular than those of measles, principally scattered over the trunk and inner sides of the arms, and not attended with pruritus or pain. The fauces showed an erythematous blush, without any swelling of the tonsils, but accompanied by a slight difficulty of swallowing. The tongue was a little white at its base. No functional disorder of any other organ—(*sinapised foot-bath, barley-water, with syrup of gum, soup, milk and water*). Next day, the exanthema presented nearly the same appearance; the day after, the colour of the spots had become fainter. The health of the child was in no wise impaired, and, on the fourth day, all traces of the affection had left the skin.

<sup>1</sup> Duplay. Mémoire sur la roséole consécutive au choléra (Gaz. de santé, in-4, p. 583. Paris, 1832).—Babington. Cutaneous eruption in cholera in Lond. Med. Gaz., v. x. p. 678.—Lepecq-de-la-Clôture avait observé cette éruption à la suite du choléra sporadique (Collect. d'obs. sur les mal. et les constit. épidémiques, p. 1005).

<sup>2</sup> Orlov (A. J.). Progr. de rubeol. et morbil. discrimine, 1785, in-4.

<sup>3</sup> Seiler. Diss. de morbil. inter et rubeol. different. verâ, in-4. Wittenb., 1805.

<sup>4</sup> Heim. Journal von Hufeland, 1812.

<sup>5</sup> Stromeyer. De rubeol. et morbil. discrimine, in-4. Gætting., 1816.

<sup>6</sup> Opera Med., sec. v. cap. 1.

<sup>7</sup> Hoffman. Opera, l. ii.—Bursarius. Institution, vol. i. Selle, Pyretologia, p. 171.



## URTICARIA.

Vocab. *Aspretudo, uredo, purpura urticaia, essera, febris urticaia, scarlatina urticaia, epinyctis pruriginosa, nettle-rash.*

270. Urticaria is an exanthematous, non-contagious inflammation, characterized by an eruption of prominent spots or wheals, paler or redder than the surrounding skin, rarely of long continuance, appearing after febrile symptoms, often recurring at intervals, or becoming aggravated by fits, and always attended by the burning and itchy sensation that follows the sting of a nettle.

Six species of urticaria have been enumerated by Willan: 1st. *Urticaria febrilis*; 2d. *Urt. evanida*; 3d. *Urt. perstans*; 4th. *Urt. conferta*; 5th. *Urt. subcutanea*; and 6th. *Urt. tuberosa*. These may be all classed under one or another of two heads, according as their course is *acute*, or as it is *chronic*.

271. *Urticaria acuta*.—1st variety: *Urt. febrilis*. This is often induced by the ingestion of various articles,—such as shrimps, lobsters, crabs, the roe of certain fishes, and, above all, mussels. Salted fish, that is, dried or smoked, and various other substances,—such as the white of egg, mushrooms, honey, oatmeal gruel, bitter almonds, and the kernels of stone-fruit generally, raspberries, strawberries, raw cucumbers; several medicines,—such as valerian, balsam of copaiba, &c., may also occasion this eruption in persons predisposed to it. It would, moreover, appear to be demonstrated that it is neither to any diseased condition of the mussels that cause urticaria, nor to any change they may have undergone, as mentioned by Burrows, nor to any poisonous substances upon which they have been believed to feed at times, nor to the presence of the *cancer pinnotheres*, a small species of crab they often contain, nor to the black sediment or scum,—the *crasse marine*, of which Lamouroux speaks,<sup>1</sup> nor yet to the sea-stars on which the creature appears to live, according to the interesting researches of Beunie, from the month of May to that of August, that their property of exciting this disease is to be attributed, but rather to a peculiar susceptibility,—to an individual predisposition on the part of those who are affected.

An hour or two and sometimes much sooner after the ingestion of one or other of the articles mentioned, a weight is felt at the epigastrium; nausea, general sinking, and giddiness, are then complained of; the skin next becomes hot, and the eruption appears on the shoulders, the loins, the inner sides of the forearms, the thighs, and about the knees, generally characterized by red or whitish elevated spots, surrounded by an areola of bright crimson. The spots are commonly of an irregular shape, but sometimes circular, raised above the general level of the skin, and of very various sizes. When they happen to be extremely numerous or actually confluent in any quarter, the skin presents a general red tint, and the face and limbs are stiff and swelled in this case—(*Urt. conferta*, Willan). The eruption is attended with itching, and a sense of prickling of the most intolerable kind, especially during the night, or when the parts affected are exposed to the air. In some cases, this variety of nettle-rash is complicated with erythematous blotches. Besides the symptoms already mentioned, it is often preceded by vomiting and by purging; and spasm, choking sensations, and convulsions, have occasionally been seen added to the list; nay, there are several cases on record in which this kind of poisoning even ended in death.<sup>2</sup>—At the end of 24 or 36 hours, in the generality of cases, the eruption declines in intensity, and soon only leaves but very faint traces of its presence on the skin, which are completely effaced a few days afterwards.

The *Urticaria ab ingestis* is not always accompanied by white itchy elevations of the skin; the eruption is sometimes no more than a simple efflorescence, having the colour of that of scarlatina, and belonging rather to erythema than to urticaria. (*a*)

(*a*) For the following description of the morbid phenomena caused by eating certain tropical fish, we are indebted to an article in the *Cyclopædia of Practical Medicine*, written by D. Houghton, who himself draws largely from Autenreith (*Ubar das Gift der Fische*). “In considering the operation of fish-poison, Autenreith divides it into three forms, which may be called the choleric, the eruptive or urticose

2. *Urticaria febrilis* sometimes appears without any appreciable cause, but sometimes evidently from the effects of teething, violent or long-continued moral affections, griefs of a domestic nature, a

form, and the paralytic or collapse form. The first two of these consist of those cases in which the impression of the poison is followed by a violent reaction of the general system, and they differ from each other in that the first exhibits its effects mainly in the internal organs, especially the stomach and bowels, while the second manifests itself upon the cutaneous periphery. The third form is named paralytic or collapse, because in it the poison acts with such intensity on the nervous system as to take away all power of reaction, so that the patient sinks under a gradual exhaustion of the vital powers. It is beside our purpose to proceed further; but as we did not describe the peculiar characters of urticaria arising from fish-poisons in the general history, we subjoin here a sketch of its symptoms as constituting the second or eruptive form of Autenreith:—

“The phenomena commence usually a short time after the repast which causes them, and are ushered in by a sudden and vehement excitation of the vascular system, with a remarkable rushing of blood to the head. Whilst the carotids pulsate and the eyes grow red and turgid with fluid, the patient becomes affected with giddiness and the most violent and rending pain in the head. The eyes roll wildly in their orbits, and the eyelids are held spasmodically open. At the same time the face swells up, as do the buttocks and the limbs, and a scarlet redness or an urticose eruption overlays the whole body, accompanied with severe burning itching. In rare instances large vesicles or bullæ rise upon the skin. The patient perhaps plunges his hands into cold water to mitigate the heat, but each time he does so he experiences a peculiar stinging or prickling in them, and also in the nose. With this eruption at one time is combined fever with hard frequent pulse, tightness of the chest, and general shivering; at another violent pains in the limbs or the back, or on the other hand, with loss of sensation, and even total immobility of the limbs. The inner surface of the body also takes a part in the morbid excitement, although in a much less degree in this the eruptive than in the choleric form of the affection. Pains in the stomach and bowels soon set in, which are followed by griping, purging, and vomiting. For the most part in the milder cases, when these evacuations take place, the erythema of the vessels gradually subsides, the cutaneous swelling sinks, the pulse loses its hardness and becomes smaller, and at length a favourable sweat comes, which puts an end to this short malady. It is frequently followed by exfoliation of the cuticle.”

“In the cases, however, which occur after the partaking of the poisonous fish of the hot climates, the recovery is not so rapid, and the disease of a much deeper cast. ‘For besides that the fore-mentioned symptoms are far severer, the heat and itching being intolerable, and the eruption of an erythematous form, and the giddiness increased to a vertiginous reeling, still further phenomena appear. Dreadful cramps in the limbs and in the intestines rack the patient; a peculiar constriction with a prickling heat occurs in the pharynx, and a painful tenesmus, with strangury and retention of urine, supervene. To these, in some instances, is added an icteroid hue of the skin, and urine, and even the sweat is known to stain the linen. But what is, perhaps, the most oppressive to the patient are the shooting pains in the swollen knee-joints, wrists, and the instep, and in the periosteum of the cylindrical bones. When he has, under these symptoms, for a long time vibrated between life and death, their violence at length diminishes, and when this occurs the skin peels off in several places, the hairs fall out, and even the nails drop. Occasionally abscesses form under the skin, which, although coming at the close of the disease, have not the same critical importance as those which are so favourable a termination to typhus; and they appear to be rather a purulent dissolution of the cellular tissue under the skin than a regular phlegmonous abscess.’ (*Autenreith*, op. cit. p. 131.) Even this laborious recovery, however, sometimes fails, and the patient sinks rapidly under the violence of the symptoms, or else, having made a rally through them, dies exhausted by the weakness succeeding them, which is in some cases aggravated by successive suppuration of the skin. After death the stomach and pharynx have presented marks of a high state of inflammation.”

<sup>1</sup> Orfila. *Toxicologie gener.*, tom. ii. p. 45.

<sup>2</sup> Foderé. *Med. legale*, t. iv. p. 85.—An account of two cases of death from eating mussels, by G. Man Burrows. Lond. 1815.—Van Couver's *Voyage of Discovery*, vol. ii. p. 286.



violent paroxysm of passion, &c. The symptoms are then nearly the same as those that have just been described, save that they are not usually accompanied by vomiting and purging. The eruption is less general, and does not last through the whole course of the disease, which occupies a week at least; it appears and disappears irregularly on almost all the parts of the body, and its returns are preceded by slight febrile symptoms.

The patient, by rubbing any part of his body, can often excite spots of nettle-rash at will. These spots vary in the period of their duration from a few minutes to two or three hours. In some very rare cases the rash continues for two or three weeks.—(Urt. *perstans*, Willan.) The patients then suffer from depression, anorexia, febrile symptoms, and functional disorder of the digestive organs.—The eruption declines imperceptibly; its returns are soon characterized by nothing more than a little itching, a symptom which is itself not long in disappearing.

When nettle-rash has been very violent, and especially when the spots have continued long, some slight desquamation of the skin is occasionally observed to follow.

272. *Urticaria chronica*.—This form of the disease commonly lasts for several months, and I have known it to continue for several years, in a girl whose mother had formerly suffered in the same way. It occurs most commonly in females, and in those individuals whose skin is more than usually sensitive. A young man, a metal gilder, produced at will, and in my presence, the pale spots of urticaria, by rubbing or pinching lightly the skin of his arm or of his face. In a great number of cases this eruption has appeared to me to be connected with a deranged state of the functions of the digestive organs, and especially of the stomach, but I have also observed it in individuals who, in other respects, enjoyed the best health. The spots appear at irregular intervals, sometimes on one place, sometimes on another (Urt. *evanida*, Willan). They often show themselves, especially in one region, without being accompanied with fever, and commonly disappear again within a few hours.—The patches are, for the most part, irregular, and bear a strong resemblance to the wheals produced by flagellation; they are not surrounded by an erythematous areola, and are accompanied by no other symptom than pruritus of a very severe kind. In some cases, the pruritus is replaced by a sensation of prickling under the skin, similar to that which is caused by the prick of a needle (Urt. *subcutanea*, Willan). The eruption, which is then very scanty, consists of a few red points, but little elevated above the level of the skin, and a small number of spots, that appear at very remote intervals.—This variety of urticaria is very uncommon, and is usually caused by violent emotions of a moral kind.

Chronic urticaria, however, is sometimes seen with more serious characters (Urt. *tuberosa*, Willan). The disease does not then consist in mere slightly prominent elevations, but in true tuberosities, of various magnitudes, hard, deep-seated, extending to the subcutaneous cellular tissue, sometimes accompanied by true ecchymoses, by pain in moving the limbs, and a tense and very sore state of the skin. These tumours, which are very itchy, appear in the evening or at night, and disappear again entirely before morning, leaving the patient weak, restless, and weighed down with languor and depression. They come out more particularly on the loins and extremities; but they may show themselves over the whole of the body, cause a general swelling of the face, of the neck, and of the limbs; be accompanied by dyspnoea, irregularity in the action of the heart, and other symptoms, distressing in various degrees, which are commonly developed under the influence of a febrile paroxysm (*febris intermittens urticata*, Frank). The eruption disappears completely with the remission of the fever, and reappears with its accession.

These varieties of chronic urticaria are very irregular in their progress, and sometimes disappear for several days, to reappear, without any appreciable cause, at intervals of uncertain remoteness. Frequently it is only after the lapse of many months, and occasionally of many years, that they are got rid of entirely, either spontaneously or by the influence of some methodical plan of treatment. Turner mentions a case in which the disease continued for ten years, and Heberden speaks of one more obstinate still, in which it lasted for seventeen years. The exanthema, when it has been very intense, is followed by a bran-like desquamation.

273. Urticaria is sometimes associated with an intermittent quotidian, or tertian fever. Jos. Frank saw it under this form, at Pavia, in the months of May and June, 1794, and at Wilna, during March and April, 1812, in so great a number of instances that this intermittent with urticaria might be held epidemic.—Urticaria is sometimes connected with chronic affections of one or other of the viscera. Its association with disorders of the digestive organs is very frequent; it is less common along with diseases of the air-passages. Clarke saw this eruption occurring in women labouring under cancer of the uterus, and I have three times met with it in women of nervous constitutions after having miscarried. In rheumatic affections, accompanied by eruptions (*rheumatic eruptive fevers*), I have almost as often observed the wheals of urticaria, as the efflorescence of erythema or roseola. Urticaria may co-exist with other affections of the skin, with lichen simplex, with erythema, with roseola, and occasionally with impetigo. Wichmann has observed it complicating variola, Hufeland, measles and icterus. I have seen an unfortunate patient, labouring at once under urticaria and prurigo, whose body was covered with stains of blood and immense scratches, tearing his person with all the eagerness of frenzy.

274. *Causes*.—Besides the causes of urticaria already pointed out, there are others that require to be mentioned. Some individuals have a skin so susceptible and so much predisposed to this eruption that the gentlest rubbing and the lightest pressure are enough to bring it out. Urticaria appears during the summer, particularly in women, and individuals generally of a nervous and sanguineous temperament, and much more frequently in children and persons in the vigour of life than in the aged. Nevertheless, cold seems to have a remarkable influence on its appearance. The wheals are more particularly developed when certain parts of the body are exposed to the air. Jos. Frank tells us the disease is as rare in Italy as it is common in Russia.

Urticaria has been observed recurring periodically every month or at more distant intervals.

275. *Diagnosis*.—The leaves of the urtica dioica, urtica urens, and rhus toxicodendron, the bite of the common bug, and, according to Réaumur, the contact of the hairs of certain caterpillars, may cause an eruption of wheals which, as they are very evanescent, it is important to distinguish from chronic urticaria, generally so rebellious to all treatment. In these cases it is enough to inquire into the cause of the eruption. The white and raised wheals surrounded by areolæ, proper to urticaria, differ not only in these respects from the spots and patches of erythema, but further by the particular sensation of pricking, scalding, and itching, which accompanies them. The acute, continued, and persistent course of erythema *nodosum* distinguishes it from urticaria *tuberosa*, which usually attacks in paroxysms. The red spots and patches of roseola cannot be confounded with the dull white wheals of urticaria, and are not attended by the pruritus that characterizes the nettle-rash. Chronic urticaria is distinguished from scarlatina and measles by a great variety of particulars; nevertheless urticaria is not always well marked on every one of the parts it invades: I have seen in a case of urticaria *febrilis* in which the raised white and itchy wheals were accompanied by a vivid redness diffused over the scrotum and penis, bearing the greatest resemblance to the efflorescence of scarlet fever; on the breast the eruption had very much the look of measles; that is to say, it consisted of semi-annular patches, the skin continuing healthy within the rounds. In such cases urticaria is distinguished by its raised wheals appearing in some places, and by the absence of the other symptoms of measles and scarlet fever.

The papulæ of lichen *urticatus* are rounded, less extensive and less prominent than the spots of urticaria; their colour is deeper, they are harder, and they never disappear spontaneously. There can seldom be any danger of mistaking the papulæ or isolated tubercles produced by the bites of insects, such as the flea, the bug, common gnat, &c., which are accompanied by great itchiness, for urticaria in any of its forms. Lastly, there is so little analogy between the eruption of urticaria and the vesicles of miliaria that I am surprised Jos. Frank should have thought of drawing a parallel between these two diseases.

275. *Prognosis*.—Acute urticaria of itself presents no danger; when it follows the ingestion of poisonous substances, these may



cause symptoms of various degrees of severity, and even death; but the eruption is of course totally unconnected with this fatal termination. The chronic urticariae are often most obstinate diseases.

The disappearance of the eruption of urticaria has sometimes been succeeded by the development or increased activity of some internal, intestinal, or cerebral affection.

On the other hand, internal inflammatory diseases have occasionally appeared to decline upon the appearance of this eruption. Koch quotes a case in which a pleuritic affection was immediately removed by the development of a nettle-rash. Under other circumstances it may be critical, or appear at the time the resolution of a serious disease is accomplished. Such was the case in a man under my care, in the hôpital St. Antoine, labouring under pneumonia on both sides of the chest who, at the moment the disease began to yield, was attacked with a swelling of the parotid glands, and almost immediately afterwards by urticaria, and various clusters of the vesicles of herpes phlyctenodes on the ears.

277. *Treatment*.—The artificial exanthema produced by the stinging of nettles, very different from the febrile nettle-rash, does not generally require any treatment. If the stinging have been very severe, however, and the eruption cause irritation, sleeplessness, and other nervous symptoms, these may be allayed by local applications—bathing the parts with cold water, either alone or with the addition of vinegar, or a little of the solution of the acetate of lead.

When acute urticaria is caused by the ingestion of any substance, either venomous of itself, or rendered so by some peculiar idiosyncrasy, if vomiting have not already taken place, it must be excited by the use of emetics; some practitioners in these cases resort at once to the sulphate of zinc or sulphate of copper, on account of their very speedy effects; others, unless the case be pressing, recommend the tartrate of antimony and ipecacuanha. After the stomach has been freely emptied, if the patient be an adult, we prescribe a drink strongly acidulated with nitric acid, and twenty or thirty drops of ether in two or three ounces of distilled water, sweetened. Next day, if the bowels have not been properly opened, we may exhibit an ounce or more of castor oil, or a sufficient dose of any other aperient; and the day after that, a warm bath.

Should acute urticaria prove independent of the ingestion of any poisonous substance, or be conjoined with inflammation of any of the mucous membranes, local bleeding from the epigastric region and verge of the anus, diluents, emollient glysters, the tepid bath, with decoction of mallow leaves, or of lettuce leaves, attention to regimen, and abstinence to a greater or less degree, fulfil a double indication in such cases, and often accomplish the cure of both complaints at once. When the state of the constitution opposes no particular obstacle to the practice, it is even necessary, in a great number of cases, to have recourse to bleeding; and in *urticaria tuberosa* the violence of the symptoms may even require us to repeat the operation. The blood drawn in such cases is almost always buffy. I have found that nettle-rash fevers were cut short in many instances by bleeding; they were uniformly very advantageously modified by the practice. When the disease is accompanied by inflammation of the fauces, of the mucous membrane of the alimentary canal, or of the bronchi, blood-letting may be farther required by these latter affections; but the remedy must not be had recourse to again and again, in the hope of extinguishing the eruption, if the first abstraction of blood have not procured very manifest relief. I once caused a patient, labouring under acute confluent urticaria (*urtic. conferta*, Willan), to be bled three times in the course of eight days, without appearing to modify the state of the eruption, which subsequently yielded to cold bathing. I have seen the spots of urticaria recalled for a brief interval by the use of the cold bath, but they were no longer accompanied by itchiness or heat. When the violence of the pruritus causes almost constant insomnia, recourse must be had to opiates.

In *chronic* urticaria, inquiry must be made whether the eruption be not perhaps kept up by the habitual use of some favourite beverage, or some article of food, which of course it would then be imperative to give up. Very many patients have derived great and speedy relief, followed by perfect recovery, by abstaining from spirituous liquors, spiced dishes, &c., and putting themselves on a system of bland and regular diet.

When urticaria *intermits*, and seems to depend on a febrile paroxysm, the eruption, along with its precursory fever, commonly yields to preparations of bark and other febrifuges. I have, indeed, several times used the sulphate of quinia successfully in simple paroxysms of nettle-rash fever, which had not the character of true intermittents, and during which the eruption appeared on a great number of regions, and with greater severity than usual. To conclude; I have seen several cases of chronic and obstinate urticaria which, after having been treated in vain by abstinence and the antiphlogistic plan, yielded to a course of purgatives, alkaline baths, and the application of the vapour and hot-water douche to particular regions. Many of these cases of urticaria were hereditary, and the disease appeared without manifest cause. (a.)

#### *Historical Notices and particular Cases.*

278. Celsus<sup>1</sup> was aware that rashes sometimes appeared on the skin analogous to those that followed the stinging of nettles. The Arabian physicians described the eruption under the name of *essera*,<sup>2</sup> which has been adopted by several pathologists. The characters of urticaria *febrilis*<sup>3</sup> have been well exposed by Sydenham, Juncker and Sauvages; and the writer last named distinguished the urticaria *evanida* by the title of *porcelanea*. Observations and cases have been published on the urticaria produced by mussels,<sup>4</sup> by crabs or lobsters,<sup>5</sup> by pork, and by other alimentary<sup>6</sup> or medicinal<sup>7</sup> substances. Frank speaks of a case of urticaria complicated with sphacelus.<sup>8</sup> Michaelis has made some observations on the ill effects of its suppression,<sup>9</sup> and of its evolution as a secondary disease in variola. Some remarks have been published on urticaria *tuberosa*,<sup>10</sup> and its treatment, on *intermittent* urticaria,<sup>11</sup> and on the use of *saline baths* in the treatment of chronic urticaria generally. Lastly, the critical dissertation of Lœchner,<sup>12</sup> and the memoirs of Heberden,<sup>13</sup> and of Kock,<sup>14</sup> are worthy of being consulted.

CASE XXIII. *Indigestion in consequence of eating mussels; urticaria.* Madame N\*\*\*, twenty-eight years of age, of a sound constitution and in the enjoyment of good health, partook abundantly of mussels at breakfast on the 2d of February, 1820. A short time afterwards she experienced general uneasiness, a kind of anxiety about the precordia, and headache. Called to render my assistance, I found the tongue clean, the epigastrium the seat of an uneasy sense of weight, the abdomen natural and soft, the pulse slow and depressed, the respiration good, but somewhat oppressed; the whole surface of the body, and especially the lower limbs, were covered with numerous wheals or raised spots, of from half to a whole inch in diameter, of a paler colour than the skin, and affected with a sensation precisely similar to that which follows the stinging of nettles. These spots,

(a) The practitioner must not yield to the impatience for immediate relief sometimes manifested by those suffering under urticaria, and be led in consequence to prescribe the external application of cold or of saline washes. Fatal results have been brought on by these means.

<sup>1</sup> Celsus. De re medicâ, lib. 1, cap. xxviii. 15.

<sup>2</sup> Chemniz. Diss. de essera Arabum. Hafn. 1707.

<sup>3</sup> Sydenham. Obs. med. § v. cap. 6. Febris erysipelatosâ.—Juncker. Conspect. med. pract. tab. 64.—Sauvages. Nosol. meth.—Scarlat. urticata.

<sup>4</sup> Moerhing. Epist. ad Werlhof, quæ mytolorum venenum et ab eo natus papulas cuticulares illustrat. Brem. 1742. (Haller. collect. diss. pract. t. iii. n. 88.)

<sup>5</sup> Gruner. Pr. De febre urticatâ, a cancris fluviatilibus et fragariæ vesicæ fructu. Jenæ, 1774.

<sup>6</sup> Winterbottom. Medic. facts and observations, vol. v. n. 6.

<sup>7</sup> Frank. Interp. clinic. i. p. 411. (Urticaria typhodes, cum sphacelo.)

<sup>8</sup> Frank (P.). Interpret. clinicæ, pars i. 8vo. Tubingæ, 1812.—Cazenave. Nouvelle biblioth. médicale, 8, 1827.

<sup>9</sup> Michaelis. Hufeland und Himly's Journ. der pr. Heilk. 1812. Feb. p. 54.—1810, Jan. p. 29.

<sup>10</sup> Frank (P.). Op. cit. p. 405-413.—Godard. Journ. de méd. l. x. 1759.—Planchon Journ. de méd. l. xvii. 1762.—Göfîn. Journ. de Sédillot, t. iv.—Clegghorn. Obs. on the epidem. diseases of Minorca. Lond. 1768.

<sup>11</sup> Tolberg. Hufeland's Journ. der prakt. Heilkunde. xxvi. B. st. p. 12.

<sup>12</sup> Lœchner (M. F.). De novâ purpuræ speciei Nesselsuchi dictâ, an aspredo Celsi vel uredo Plinii et aurigo Vegetii et Apuleii? (Eph. nat. cur. cent. v. et vi. p. 55.)

<sup>13</sup> Heberden. Of the Nettle-rash, (in Med. Trans. of the Rl. Coll. of Phys.—vol. ii. p. 133.)

<sup>14</sup> Kock. Progr. de febre urticata. Lips. 1792.



which were evidently caused by partial swellings of the true skin, were surrounded by inflamed areolæ. (*Two grains of tartrate of antimony to be dissolved in three glasses of water, one to be taken at intervals of ten minutes.*) The patient vomited several undigested mussels, but many fewer than she had swallowed. She, however, felt greatly relieved. (*Emollient cataplasms to the abdomen, lavements.*) In the evening the wheals had disappeared, and the patient was better; next day she felt perfectly well.

CASE XXIV. *Urticaria, gastro-enteritic symptoms.* G\*\*\*, sixteen years of age, had complained for several days of headache, pain in the abdomen and loss of appetite. On the 25th of February, 1826, after eating rather less breakfast than usual, he went a short way into the country, but soon returned and lay down in bed. When brought to see him, he was complaining of an intolerable sense of heat over the skin, and particularly on the insides of the arms and thighs, and on the neck, which he compared to the stinging of nettles. These parts were in fact found on examination to be covered with large prominent spots or wheals, whiter than the skin which surrounded them, and precisely similar to those produced by urtication. Somewhat later, similar prominent spots appeared on the breast; these were surrounded by a highly inflamed areola. The patient had scratched himself severely, and to this perhaps the redness of the skin was owing. The face was a little puffed, the eyes sparkling and the head hot; farther, the tongue was white and stippled with red points; there was thirst, and pain and heat of the epigastric region; retching was induced by taking a little lemonade; the bowels had been locked up for two days; the urine was scanty and high-coloured; the breathing was unaffected (*sixteen leeches to the epigastrium; demulcent drinks sweetened with honey; cataplasms to the abdomen after the fall of the leeches.*) Next morning the eruption had entirely disappeared; the febrile symptoms and pain of the epigastrium were greatly relieved. Towards four o'clock in the afternoon, however, there occurred another paroxysm of fever, followed by a second eruption of nettle-rash, which in less than half an hour spread from the chin over the trunk and limbs (*twelve leeches to the epigastrium; drink as before; lavement*). Within an hour the eruption had gone away completely, and the patient felt relieved. He continued bathed in sweat during the night. Next morning, perfect apyrexia. There was no further return of the nettle-rash, and the gastric symptoms subsided by a few days attention to diet.

CASE XXV. *Acute urticaria returning at irregular intervals. Prescription of sulphate of quinia.* J. Lepommier, aged 47, in the enjoyment of good health, uninterrupted till within the last six months, was received into the hôpital St. Antoine, on the 7th September, 1829. On the 4th he had been thrown into a violent passion, and the same evening his skin became covered with wheals of nettle-rash, which were excessively itchy, and prevented him from sleeping. The night was very restless; in the morning every part of the body was covered with patches of urticaria, some of which were as large as the hand, others much smaller; all were surrounded by an erythematous areola. In several places, instead of the pale prominent wheals, broad red spots were observed, level with the general surface of the skin and irregular in their circumference. These disappeared completely under the pressure of the finger, whilst the redness around the wheal only became fainter. The pruritus continued, and came on in paroxysms; the pulse was full and frequent; the face and limbs were swollen and covered with true nodosities. The abdominal and thoracic viscera were unaffected—(*venes. ad 3xvi.*) The blood was buffed. 9th.—The heat and pruritus are less troublesome; the red areolæ are more conspicuous than the prominent wheals; bowels relaxed; pulse full and frequent. (*Mucilaginous drink; julep; venes. ad 3viii.*) 10th.—The blood no longer shows the buffy coat. The pruritus so troublesome as to have prevented sleep; bowels still relaxed, (*medicine as before; cold bath.*) 11th.—The patient felt comfortable in the bath; on returning to bed, several new patches came out and proved excessively itchy. Two or three times during the day fresh spots appeared, which vanished again within an hour or less. A fresh eruption has been observed to come out regularly every evening, which lasts several hours, and disturbs or completely prevents sleep. (12th.—At night; *eight grains of the sulphate of quinia at the end of the evening paroxysm; lavement.*) 13th.—A smaller number of spots

showed themselves on this than on preceding days; but the patient is restless, and suffers from heat of skin and pruritus. 14th.—A very small number only of wheals had appeared, and the patient scarcely complained either of heat or itching. (*Sulph. of quinia repeated.*) The eruption after this appeared no more, and the patient left the hospital on the 23d of September cured.

## ARTIFICIAL EXANTHEMATA.

279. Menuret<sup>1</sup> remarked that cloths whitened with *eau de javelle*<sup>2</sup> which had not been properly rinsed before being dried, gave rise to erythematous eruptions, of no great severity indeed, but yet sufficiently troublesome. Towards the decline of the epidemic cholera of 1832, I saw a considerable number of convalescents suffering from chronic erythematous inflammations following the application of mustard poultices. The *urtica urens* and *urtica dioica* are familiarly known to produce an eruption very similar in appearance to that which accompanies the *febris urticata*.

Odier<sup>3</sup> having applied the emplastrum ammoniaci cum hydrargyro of the London Pharmacopœia, to a species of wen, the application was followed two days afterwards by an erysipelas, accompanied with much swelling, which spread to the whole arm. The redness and swelling continued for several days, when violent fever set in attended with an eruption over the whole body of large red spots, intermingled with small pimples. Two bleedings, and the antiphlogistic regimen, put an end to these symptoms in the course of a week.

I once attended a man, fifty-nine years of age, labouring under a lumbago, who had an extensive erythematous eruption of the loins produced by frictions with the oil of the lauro-cerasus. This affection consisted of one large red blotch, not raised in any point above the level of the skin, but unevenly spread over the surface, which appeared stained and dotted in different places. This appearance was owing to the large red patch being formed by the agglomeration of many smaller ones, whose circumferences, less inflamed than their centres, melted away in different places into shades very little different from those of the healthy skin; several points of a more vivid red than the spots in general, scattered over their surface, gave to these last, and consequently to the large patch resulting from their conjunction, something of a dotted or stippled aspect.

The red colour disappeared momentarily under the pressure of the finger. The patient complained of slight pruritus in this part, but there was no morbid increase of temperature, nor any swelling of the subcutaneous cellular membrane. All the principal functions of the body were properly performed. The efflorescence was left to itself; the lumbago yielded to the use of gentle purgative glysters; the red patches of the loins finally grew pale, and were followed about the seventh day by a slight desquamation of the cuticle.

Amongst the numerous patients who are seen at the dispensary of La Charité, and who there take the vapour or the sulphur bath, I have seen many attacked with vesicular and papular eruptions, and with artificial exanthemata, which were always of short duration. Several other remedial means, such as ammoniacal or acid lotions, alkaline baths and sulphureous fumigations may produce artificial exanthemata, which are to be distinguished from each other, and from diseases depending on internal causes, by mounting to their sources.

M. N—, forty-six years of age, having at four o'clock in the morning taken forty-four grains of belladonna, was seized about an hour afterwards with supra-orbital headache of the most violent description, and excessive redness of the skin, which first appeared about the eyes and face, and then extended to the whole of the integuments. Within a few minutes the entire surface of the body presented a uniform red tint exactly similar to that observed in scarlatina; the throat of the patient was also intensely red, and affected with heat, which seemed to be propagated through the whole course of the alimentary canal. Another remarkable symptom was this: that the urinary passages, and especially the neck of the bladder, became extremely painful. The patient, in the midst of his delirium, was

<sup>1</sup> Recueil périod. de la soc. méd. de Paris, t. xxxiii. p. 43.

<sup>2</sup> A solution of the chlorate of potash in water.—R. W.

<sup>3</sup> Mém. de la soc. roy. de méd., t. iii. p. 213.



perpetually asking for the pot de chambre, and it was with difficulty that he succeeded each time in passing a few drops of red and bloody urine. All these distressing symptoms were relieved by a copious bleeding, demulcent drinks, soothing glysters, and the application of leeches.

Several other substances taken into the stomach, occasionally cause exanthematous eruptions. In a case of poisoning by the *Datura stramonium*, which occurred in a child two years old, Dr. Meigs, of Philadelphia,<sup>1</sup> tells us that the face of the patient became of a deeper scarlet colour than he had ever observed it, even in scarlatina; the skin was hot, the pulse very quick, the tongue and fauces dry and red; the tongue was so parched that its surface appeared shining. The face, the neck, and the breast, were covered by a multitude of small spots of a brilliant red colour, many of which were star-shaped.

## BULLÆ, OR BULLOUS INFLAMMATIONS.

Vocab. *Bulla. Phlyctena.*

280. Bullous inflammations of the skin are characterized when at their height, by small tumours, varying in size from that of a pea to that of a goose's egg, generally transparent, and formed by the effusion of a serous or sero-purulent fluid between the corion and cuticle.

281. Two cutaneous inflammatory affections constantly appear under this form: these are pemphigus and rupia. Ampullæ, or the vesications produced by violence, and that follow the application of blistering plasters, compose a group of artificial bullæ very distinct from the preceding. Bullæ are also accidentally developed in the course of many phlegmasiæ of the skin, and particularly in burns and frost-bite, in erysipelas, [small-pox, varicella] and several acute species of eczema.

282. Rupia was classed by Bateman among the *Vesicles*.<sup>2</sup> He says, "the eruption is characterized by broad and flattish vesicles." Vesicles and bullæ do not differ essentially from each other except in their size, and I greatly prefer classing rupia with the bullous inflammations, the disease having a much nearer affinity to pemphigus, and especially to pemphigus *infantil*is, than to scabies, miliaria and the other vesicular eruptions. When herpes zoster or zona, has attained its complete development, it very frequently appears with the characters of a *vesiculo-bullous* inflammation, which seems to form the link of connection between bullous and vesicular diseases. Willan assigned this disease its true place among the *herpetes*, and I committed an error when I removed it from that group in the first edition of this work.

283. An erythematous spot of one degree of intensity or another, probably always precedes the formation of bullæ, although this cannot in every case be demonstrated. The period of time required for the evolution of bullæ is very various; they may be formed almost instantaneously in one case, and in another advance with extreme slowness to their greatest height. The fluid they contain is most commonly serous and transparent, but occasionally it is sero-purulent or sanguineous; now and then it is separated from the dermis by an interposed layer of coagulable lymph; it may remain for a long time pent up in situations where the epidermis is thick and strong, as in the palms of the hands, soles of the feet, &c., or be speedily shed on the surface of the skin when the bullæ are thrown out on such parts as the eyelids, the cheeks, the lips, &c. This fluid often dries up and forms solid scabs of various thickness, and the skin, which these incrustations cover, either secretes a new epidermis and heals up rapidly, or becomes affected with ulceration, the cure of which proves more or less tedious.

284. The vesications produced by violence, by the application of cantharides, of liquor ammoniæ or boiling water to the skin, or by simple over-distension of the integuments, always indicate a degree

of local irritation greater than that which causes the erythematous blush; but it would nevertheless be impossible to demonstrate that the skin was more violently irritated in pemphigus and rupia than in scarlatina and urticaria. We cannot institute comparisons between the intensity of inflammations of different forms unless they are produced by the same cause. Thus the simple redness, the vesication, and the eschar, produced by a burn, are degrees of inflammation successively of greater intensity; but when causes come to be different, comparisons are no longer admissible; and we cannot say that the bleb of pemphigus is the index of a higher degree of positive inflammation than the efflorescence of scarlet fever, or the pustule of small-pox.

285. Bullous inflammations at their height cannot be confounded with any of the exanthemata. (209.) They have, on the contrary, great analogy with the vesicular inflammations, from which, however, they differ in the characteristic size of their vesications; bullæ being always much more considerable than vesiculæ. The *accidental* bullæ, produced by the confluence of several vesicles, such as are occasionally observed in zona and other varieties of herpes, present a peculiarity of character that always distinguishes them from true bullæ: their bases are constantly irregular, and seem composed of minute arcs of circles which proclaim the fusion of several smaller vesicles into one.

286. The diagnosis of these inflammatory affections, necessarily uncertain when the bullæ are not completely developed, or when the erythematous spots that precede the bullæ alone appear upon the skin, may also become very obscure when the bullæ are broken, their contents dried up, and they are succeeded by incrustations of variable thickness, by marks or by superficial sores or excoriations. The uncertainty can only then be dissipated by accurate information relative to the state of the skin previous to the formation of any scabs, marks or ulcers, or by a minute study of the form, the kind and the size of the alterations consequent on the different species of bullæ. (Vide Pemphigus, Rupia.)

## PEMPHIGUS.

Vocab. *Bulla, Hydatides, Pemphigus, Pemphigoid fever, Pompholix.*

287. Pemphigus is characterized by the eruption on several regions of the body of one or more large, yellowish and transparent bullæ, which terminate by the effusion of the fluid they contain, and the formation of a scab of variable thickness, or of a superficial excoriation.

The various appearances which the age of the patient (pemphigus *congenitus*, pemphigus *infantil*is), the number of bullæ (pemph. *solitarius*, pemph. *confluens*), their mode of appearing (pemph. *simultaneus*, pemph. *successivus*), the greater or less rapidity of their course (pemph. *acutus*, pemph. *chronicus*), the existence or absence of febrile systems (pemph. *pyreticus*, pemph. *apyreticus*), &c., give to this eruption, have been the cause of a multitude of distinctions, which pathologists have created to facilitate the study of the disease. I adopt, as fundamental distinctions, the two following: pemphigus *acutus*; pemphigus *chronicus*.

288. *Acute* pemphigus, (*febris bullosa, febris pemphigoides, febris synocha cum vesiculis*, &c.) is a rare disease. I have seen but a very few cases of it. It may be general or partial. It appears on every region of the body, most commonly on the lower extremities; occasionally, however, also, on the arms, the trunk and the face; it is very seldom seen on the soles of the feet, the hairy scalp or the genital organs. The bullæ almost always stand apart from each other.

The disease occasionally attacks without precursory symptoms; but may also be preceded by a sense of general uneasiness, violent pruritus of the skin, and slight fever; or otherwise it is ushered in by an irregular chilly fit, after which the skin becomes parched and burning, the patient complains of thirst and anorexia, and the pulse becomes excessively rapid. These symptoms last for one, two or three days. The eruption then shows itself by one or more circular or oval red spots, slightly prominent, and varying from a few lines to several inches in diameter. At first of a bright red, they soon turn to a more dusky hue. Their development is preceded and accompanied by pain and heat in the affected parts. The erythematous patches are

<sup>1</sup> North American Medical and Surgical Journal, January, 1827. Extract in Journ. des progrès des sciences et des institutions médicales, t. iii. p. 242.

<sup>2</sup> Bateman, Synopsis, &c. 5th ed. p. 243.



next transformed into true *bullæ* or *blebs*. A certain quantity of transparent serum, effused beneath the epidermis, raises it in the form of vesications which have with justice been compared to the blisters produced by the application of hot water or cantharides to the skin. The development of these bullæ often takes place almost immediately after the appearance of the erythematous blotches, the entire surface of which they rapidly cover; a circumstance which has led some writers to suppose that pemphigus was not preceded by any redness of the skin. The existence of these red patches, however, is so positive that bullæ occasionally appear surrounded by a distinct circular red border, which happens from the parts of those patches nearest the circumference, not being implicated in the bleb covering its centre and the greater portion of its superficies.

The skin between the bullæ appears perfectly unaffected; at least this is the case where the bullæ do not approach very closely to each other, for where they do it may present a more or less decided erythematous blush.

The number of bullæ is in general so much the greater as the disease attacks a greater extent of the integuments. Occasionally, however, a small number of bullæ have been seen disseminated over the entire surface of the body; whilst in other circumstances they have been observed thickly congregated in a single district. Now and then there exists no more than a single large bulla (*pompholyx solitarius*, Willan). The development of this bleb, which rapidly acquires such dimensions as at length to contain several ounces of serum, is preceded by a sense of smarting in the part where it is to appear. This bleb bursts in the course of eight and forty hours. It often happens that a second bulla arises two or three days afterwards in the vicinity of the first; and this may be followed in its turn by two or three voluminous bullæ which are evolved in the same manner; but the disease now generally becomes chronic in its nature. This variety is extremely rare. I have seen it occur on the leg of a young man convalescent from dothineritis.

The bullæ of pemphigus vary in size from that of a split pea or an almond to that of a hen's egg or a large blister. From the very moment of their formation the bullæ possess, in a great measure, the size they will attain at every subsequent period. Having reached their height, the greater number of them contain a serous fluid, which is transparent, and of a yellowish or yellowish-green colour, similar to the serum of an ordinary blister. When the primary inflammation of the skin is very acute, a quantity of coagulable lymph may be deposited on the outer surface of the dermis. Plump and distended during their growth and at their acme, which usually extends over a period of two or three days, the bullæ of pemphigus then become flaccid, wrinkled and half full; they form towards their most depending part a small hanging pouch in which the serum is mostly contained. At the end of from twenty-four to forty-eight hours the majority of them give way, and suffer the greater part of the fluid they contained to escape.

After the bursting of the bullæ, if the epidermis be detached by rubbing, or in any other manner, *excoriations* result; which are painful in a greater or less degree. Even more commonly, however, the bullæ are replaced by lamellar incrustations, which are of a pale brown colour at first, and become gradually of a deeper hue as they grow older. When these scabs are in their turn detached, the skin remains marked with spots of a dusky red hue in those places where the bullæ had been evolved. The duration of each bulla extends on an average to about seven days; that of acute pemphigus varies from one to two weeks when the eruption is *simultaneous*, and from three to four weeks when it is *consecutive*.

When the eruption of the bullæ is simultaneous and confluent, or when pemphigus is complicated with another inflammatory affection of the skin, it is almost always attended by a febrile paroxysm; if the eruption invades the mouth or the genito-urinary organs, if it be combined with a deranged or inflamed state of the digestive apparatus, or of any other important organ of the body, the general symptoms may assume a character of considerable intensity. An acute pemphigus, accompanied by a copious eruption, has been observed to produce delirium, extreme restlessness, and exhaustion in children, and in old persons to be followed by adynamic symptoms of such gravity, as in some cases to have even proved fatal.

We occasionally observe bullæ imperfectly developed. These appear under the form of circular and prominent erythematous patches. By passing the finger over their surface, the cuticle is felt to be loosened, and a slight effusion is perceived between it and the dermis. The loose portion of cuticle is detached at the end of a few days, and leaves exposed a red spot covered with a thin and glistening epidermic layer.

289. *Chronic pemphigus (maladie vesiculaire, dartre phlyctenoides confluent, Alibert; pompholyx diutinus, Willan)*, is a much more common disease than acute pemphigus, from which it differs in the long continuance of the eruption, which commonly extends over several months, by the mode of development of the bullæ, which is always successive, and by the absence of febrile reaction, at least during the earlier periods of the disease.

290. Chronic pemphigus especially attacks men advanced in years; occasionally, however, those in the prime of life suffer from it; individuals of the male are much more frequently attacked than those of the female sex. The bullæ of chronic pemphigus succeed each other at various intervals during from ten weeks to seven or eight months, and occasionally, even during several years. In one case they are confined to a single region, in another they invade every part of the body in succession. Several days before the first eruption of the bullæ patients commonly complain of pains in the limbs, and feelings of lassitude and depression; these sensations, however, are often so slight as to be passed over without attracting particular notice. Small *red patches*, preceded by smarting, show themselves on one or several regions of the body, from the centres of which the epidermis begins to rise whilst their circumference spreads, so that in the course of a few hours bullæ are formed as large as filberts or even as walnuts, and by the end of two or three days, several acquire the size of a pigeon's egg. These bullæ are either burst from being rubbed, or give way in consequence of mere distension. The raised portion of cuticle then sinks down and becomes wrinkled or lies in folds over the surface of the inflamed dermis; or if it be removed completely, painful excoriations are left bare and unprotected, in the immediate neighbourhood of which the epidermis looks wrinkled, and subsequently undergoes a slight exfoliation. The bullæ which have not been broken become turbid and sink down; they assume a whitish colour, and by and by are replaced by flattened scabs, of little thickness and of a brownish hue. New bullæ continue to arise in the neighbourhood of the old ones, and are sometimes preceded by prickling or smarting sensations, a febrile paroxysm, and violent lancinating pains, similar to those which herald the eruption of shingles; I have heard several patients compare the pains they suffered to the impression of the electric spark.

Such are the appearance and the most usual progress of chronic pemphigus; but they may be variously modified.

The usual antecedent circular red patches, for example, are occasionally not visible except on the evolution of the first bullæ, or otherwise, only before the last crops of the eruption that happen. I have in several instances seen the bullæ begin as vesicles no larger than lentils, which afterwards went on increasing till they attained the size of small eggs. Some bullæ are surrounded by an areola, others are not. Most commonly disseminated and distinct, bullæ are more rarely seen clustered together in irregular groups, or arranged in rings similar to those of two varieties of herpes.

Bullæ may be confluent or conjoined by their bases; in this case they are soon seen to contain purulent matter, and are succeeded by thin scabs, the intervals between them being occupied by squamæ that lie in some degree over one another. This variety is most commonly seen on the face. Occasionally the eruption fixes on a small surface, three or four inches in diameter; I have, however, seen it more frequently confined to the face, hands and forearms on which bullæ continued to follow each other during several months; the affection has also been seen on the lower part of the leg. When the eruption is considerable the patient is sometimes obliged to keep his bed; but there is rarely any degree of fever present, unless, indeed, the inflammation have been propagated to the mucous membranes. When the excoriations are numerous, patients often sink exhausted by pain and want of rest, or are cut off by dropsical affections and colliquative diarrhæas.



221. Pemphigus affecting the skin may be preceded or accompanied by an inflammation the same kind of the mucous membranes of the alimentary canal or genito-urinary apparatus. This affection either shows itself under the form of circular red patches, or of flattened bullæ on those parts that are provided with an epithelium. I had an opportunity of observing this extension of the disease to the mucous membranes, to a very great degree, in an old mayor of Paris, labouring under chronic pemphigus complicated with prurigo, whom I attended along with Messrs. Maury and Kapeler. On several different occasions we could perceive flattened bullæ on the lining membrane of the mouth and pendulous velum of the palate, and in the last stages of the disease, which the most unwearied attention had no influence in checking, the inflammation extended to the great intestines, the bladder and bronchiæ.

Inflammation of the mucous membrane of the mouth and fauces is often seen allied with pemphigus of the face, of which disease, indeed, it is then a mere extension. Cæco-colitis, cystitis, and inflammation of the vagina frequently complicate the disease when it appears on the parietes of the abdomen, or on the upper and fore parts of the thighs. In these complicated cases, the functional disorders of the digestive organs and of the urinary passages are associated with the morbid phenomena induced by the inflammatory affection of the skin. The appearance of the bullæ is preceded or accompanied by a state of languor and lassitude, by headache, sickness, dysuria, pains in the limbs, &c. Besides the gastric and intestinal disorders, which complicate pemphigus so frequently that they have even been regarded by M. Gilibert as one of its elements, other affections, and particularly several forms of skin disease, such as herpes and prurigo, are occasionally added to the list. Pemphigus may also occur in the course of vaccinia and scabies; and it has sometimes appeared to decide the fate of internal inflammations, such as pneumonia and dysentery, and to replace rheumatic attacks. But M. Gilibert was, in my opinion, deceived when he regarded erysipelatous inflammations, presenting accidental phlyctenæ here and there, as instances of this exanthematous disease, complicated with pemphigus. It is also necessary to be on our guard against confounding true pemphigus with the accidental bullæ which are observed to occur in some old cases of scabies, or in consequence of œdema. Those writers have also done wrong, as I conceive, who have contrasted with acute pemphigus those usually flaccid phlyctenæ half full of bloody serum, which occasionally appear on the buttocks and trochanters in the course of severe dothineritic affections.

222. *Structural Changes.*—The alteration of the skin that occurs in pemphigus, is precisely similar to that which results from the second degree of burning, and the application of blistering plasters. In pemphigus infantilis, the dermis is often ulcerated in the centres of the bullæ (Case XXVIII). The mucous membranes of the nipple, of the vulva, of the lips and inside of the mouth, are all frequently the seat of true bullæ. It was a mistake to suppose, as has been done, that the bullæ of pemphigus could be evolved on the mucous membrane of the stomach and intestines, these parts not being provided with any epithelium; but it is certain that in chronic cases of pemphigus which have terminated fatally, the redness, thickening, softening, ulceration, and other changes induced by inflammation in mucous membranes, have frequently been encountered. The greasy liver has several times been found in individuals who have died from pemphigus.

223. *Causes.*—These are in general very obscure. Pemphigus appears more particularly during the autumn and winter; it attacks both sexes, and individuals of every age, but especially old men. It has also been seen as a congenital affection. The serous fluid of its bullæ has been inoculated, but the punctures did not inflame. M. Garde and I tried the experiment on ourselves, performing the operation with purulent serum from the bullæ of a woman advanced in years, and affected with chronic pemphigus, but without other effects than such as follow a simple puncture. The process of dentition among infants; excesses or irregularity in diet, and violent moral affections among adults; and amenorrhœa and dysmenorrhœa among women, have all occasionally seemed to influence the development of pemphigus. Several authors have observed the disease as an epidemic.

Chronic pemphigus attacks those individuals especially whose

general constitutions have suffered; living in cold and damp places, and on unwholesome food, seems also to favour its development, which, under other circumstances, is perfectly inexplicable. The blood is often found to be buffy during the continuance of the disease.

224. *Diagnosis.*—When the bullæ are distinct and unbroken, pemphigus cannot be mistaken for any other disease. In an anatomical point of view, burns, attended with vesications, have some resemblance to partial pemphigus, but the cause that produced the blisters enables us to distinguish the two affections. When a single bulla (*pompholyx solitarius*) constitutes the whole affection, and appears without an areola, it resembles in all respects the vesication produced by a blistering plaster, and the one does not in fact differ from the other, save in the exciting cause. I shall by and by have to relate a case of pemphigus simulated by means of the powder of cantharides. In rupia, the bullæ, which are usually less numerous, smaller and flatter than those of pemphigus, are followed by true ulceration of the skin, and become covered at length with thick and prominent scabs.

The bullæ which we find now and then accidentally developed in erysipelas, differ from those of pemphigus by appearing on an extensive surface of a uniform red colour, with swelling of the subcutaneous cellular substance.

When the bullæ of pemphigus are small and clustered together, (Case XXX,) the eruption may be distinguished from herpes phlyctenodes, by the circumstance of the bullæ of pemphigus being always larger than the vesicles of the herpes, as well as by the former being uniformly accompanied by isolated blebs that sufficiently proclaim the nature of the general affection.

The scabs of pemphigus are distinguished from those of impetigo by being thinner, less rugous, and shagreen like; they are also generally bulging in the middles, wrinkled in their circumferences, and formed of a single piece that represents the extent and something of the form of the bullæ to which they have succeeded. The scabs of acute pemphigus frequently present a perfectly characteristic disposition: the incrustation formed by the drying up of the fluid collected in the most depending parts of the bleb, is covered by a cuticular disc of a yellowish-brown colour, and of the size of the bullæ.

The marks which pemphigus leaves after the detachment of the scabs or cuticular discs, are separated from each other by healthy skin, of a dusky red colour; they are of various magnitudes, and often bounded in their circumference by a very distinct epidermic border.

225. *Prognosis.*—Acute pemphigus without pyrexia, ends naturally within two or three weeks. When the eruption is preceded, attended, or followed by febrile symptoms, the disease assumes a character of gravity, great in proportion as it is complicated with nervous and adynamic symptoms; this last complication is happily very rarely met with.

Chronic pemphigus indicates a bad state of constitution; it is always a very obstinate affection, and proves troublesome in the same ratio as it is more extensive, more frequently renewed, or complicated with chronic bronchitis, inflammation of the bladder, &c. Pemphigus pruriginosus often proves fatal when it attacks persons in the decline of life.

Several cases are related in which pemphigus seemed to have a beneficial influence on the course of some internal maladies. I once saw a man who, after having had several attacks of hæmoptysis, became subject to chronic pemphigus of the legs, and from this period the bleeding from the lungs did not recur. The cure of pemphigus has, in some cases, been observed to be followed by various ill consequences.

226. *Treatment.*—In acute pemphigus without fever, when the bullæ are few in number, and not of very large dimensions, the eruption may be left to itself, or at most, the serum of the vesications should be evacuated by one or two small punctures made in the epidermis.

When the eruption in this form of the disease is more considerable, care is to be taken that the cuticle continues applied to the surface of the spots that have sustained bullæ; these are sedulously to be protected from friction, and in case they should become denuded, are to be immediately dressed with a perforated rag (*linge fenêtré*) spread with cerate. The general treatment may consist in the exhibition of diluents,—lemonade, and the vegetable acids,—milk diet, the antiphlogistic regimen and an occasional warm bath. Should the erup-



tion have been accompanied or preceded by fever, or the inflammation of any internal organ, should the patient be of a robust constitution, or the bullæ have followed amenorrhœa, bleeding from the arm or foot must be practised, or leeches applied in the vicinity of the part affected.

When chronic pemphigus implicates but a small extent of surface, and the state of the constitution appears satisfactory, the disease will occasionally yield to the use of diluents, and of the warm or cold bath, either simple, or alternately with a tepid slightly alkaline bath, which is found greatly to relieve the accompanying pruritus and heat of the skin.

In an adult, or one whose constitution does not appear to be sensibly deteriorated, should chronic pemphigus have invaded through a period of several months, almost the entire surface of the body successively, should there be at the same time fever, and numerous excoriations scattered over the skin, and should the inflammation, in fine, have spread to the mucous membrane of any part, a general bleeding ought by all means to be practised, whilst the skin is covered with emollient gelatinous or oily applications.

Emollient baths are often of service, but they must not be continued too long, nor taken at too high a temperature. When the patient is too weak to use the bath himself, this means must be abandoned, as painful excoriations are almost constantly produced by giving him any assistance out or in, or by helping him into his bed. In such circumstances the patient must be laid on an oil-cloth whilst the inflamed parts of the skin are covered by compresses, frequently renewed, wrung out of some emollient and narcotic decoction.

Lastly, when the accompanying inflammatory affections of the stomach and bowels become very severe, and when blood-letting cannot be had recourse to on account of the weakness and state of exhaustion of the constitution, we turn to soothing and narcotic medicines, especially to such as contain neither wine nor alcohol, in graduated doses. When sickness or pain of stomach is excited by a draught of fluid, the drink may be administered by spoonfuls at a time to quench the thirst.

Occasionally recourse has been had, with success, to a milk diet, which was subsequently changed by degrees for more nutritious food. In elderly persons, whose constitution did not appear to have suffered materially, and when there were no symptoms of irritation in the digestive organs, the acidulated decoction of bark, wine and water, bitters, chalybeate medicines, and a tonic regimen have all been found of advantage; the mucous membrane of the digestive apparatus, however, so seldom escapes implication in this variety of pemphigus, that too much caution cannot be observed in the use of these medicines and remedial means.

When the digestive apparatus is healthy, purgatives are sometimes beneficial. Sherbets prepared with the nitric and sulphuric acids continued for several months, have also effected remarkable cures.

Chalybeates, such as the subcarbonate of iron, in doses of half a drachm or two scruples, the sulphuret and carburet of iron, the vinum ferri, &c., are all very serviceable when the eruption has been preceded by dysmenorrhœa and amenorrhœa.

The preparations of arsenic are always to be prescribed with great discretion, and only when the stomach and intestines appear perfectly free from actual disorder, (Case XXX,) or from predisposition to inflammation.

Pemphigoid inflammations of the mucous membranes occurring in old subjects where they have continued long, or been frequently revived, ought not to be treated by the detraction of blood, which only reduces the strength, without preventing the return of fresh eruptions. Soothing gargles, and such as are acidulated with the muriatic acid, or prepared with a solution of alum, often produce favourable modifications in bullous inflammations of the mouth and pharynx. Diuretic drinks containing a portion of nitre, and emollient topical applications to the pubes, along with glysters of pellitory, often relieve the dysuria and check the hæmaturia that occasionally supervenes during the last stages of chronic pemphigus. The diarrhœa, which often precedes these symptoms, as well as the sleeplessness occasioned by the pain of the excoriations, and the accidental occurrence of prurigo are to be soothed by opium in one form or another. When the continued action of opium seemed to oppress the stomach, I have frequently, and with good effect, ordered half, or three-quarters of a grain, of the

hydrochlorate of morphia to be applied to the abraded surfaces of one or more of the bullæ. Dropsical symptoms occurring at this period are almost always the precursors of approaching dissolution; the scene of pain and suffering, however, is more frequently terminated by an obscure affection of the lungs.

#### Historical Notices, and particular Cases of the Disease.

297. The account which Hippocrates<sup>1</sup> has left us of the *pemphigoid fever* is very obscure. Ch. Lepois<sup>2</sup> was the first who gave a clear description of pemphigus.

A great many observations have been published on *acute pemphigus*, in which the *eruption of bullæ took place at once*,<sup>3</sup> and on *acute pemphigus with successive eruptions*,<sup>4</sup> on *acute pemphigus complicated with intestinal*, or as they are styled, *biliary affections*,<sup>5</sup> with *gastro-enteritis*,<sup>6</sup> with *pneumonia*,<sup>7</sup> with symptoms of great depression,<sup>8</sup> with *vaccinia*,<sup>9</sup> and with *prurigo*.<sup>10</sup>

We possess a still larger mass of information in regard to *chronic pemphigus*,<sup>11</sup> to *hereditary pemphigus*,<sup>12</sup> and to the disease as it attacks the *aged*,<sup>13</sup> we have also some remarks on the disease with a *gangrenous* character,<sup>14</sup> which, perhaps, are rather applicable to *rupia escharotica* than to this complaint, on the pemphigus of *camps*,<sup>15</sup> on the complication of pemphigus with *hysteria*,<sup>16</sup> on the pemphigus of children,<sup>17</sup> of the *fœtus*, and of the *new-born infant*,<sup>18</sup> of *pregnant women*,<sup>19</sup> lastly, we possess the researches of M. Brachet<sup>20</sup> on several different species of pemphigus. The facts collected by M. Ozanam<sup>21</sup> on epidemic pemphigus, and the critical and historical inquiries of M. Bidault de Villers,<sup>22</sup> will all be perused with interest.

298. The following cases refer to several varieties of pemphigus. One of these is so rare as to have led many pathologists to question its existence; this is *pemphigus acutus*; another had never been

<sup>1</sup> Hippocr. Opera. Ed. Ren. Charterii, t. ix. p. 38.—Foes. Œconomia Hipp. Art. Pemphigoides pustulæ.

<sup>2</sup> De morbis a serosa colluvie et diluvie ortis. Obs. 149.

<sup>3</sup> Delius Amœnitates medicæ. Casus, ix. p. 71 (febris catarrhalis vesicularis).—Seliger (Ch.). Ephem. nat. cur. decas, 1 ann. VIII. Obs. 56.—Hébréard. Observ. sur le pemphigus (Journ. génér., t. xliii. p. 376).—Gilibert. Monographie du pemphigus, in-8. Paris, 1813.

<sup>4</sup> Dickson. Observat. on pemphigus (Transact. of Irish Acad. 1787, p. 47).—Hoffmann. De affectu raro scorbutico pustulari. Suppl. ii. p. 2.—Miroglio (Journ. de méd., t. lxxxi. p. 221).—Gilibert. Adversar. medico-practica prima. Lugduni, 1771, p. 183.—Vallot. Recueil périodique de la société de méd. de Paris, t. iv. p. 292.—Stewart (David). A case of the pemphigus major of Sauvages. (Med. and phys. comment. by a society. Edinburgh, vol. vi. p. 79.)

<sup>5</sup> Finke. De morbis biliosis anomalis, etc., p. 118.—(Jalabert. Journ. de méd., t. lxxxii. p. 65.)

<sup>6</sup> Robert. Observat. sur une fièvre vésiculaire (Journ. de méd., chir. et pharm. t. xxxii. p. 227).—Barbier. Annales de la méd. physiol., t. ii. p. 78.—Richard. Ibid., t. iii. p. 274.—Strambio. Bullet. des sc. méd. de Férussac, Mars, 1827, p. 248.

<sup>7</sup> Frank (J. P.). Epit. de cur. hom. morbis, lib. iii. p. 258.

<sup>8</sup> Savary. Journ. de méd., chirurg. et pharm., t. xxii. p. 203. Sept. 1811.

<sup>9</sup> Husson. Recherch. hist. et médic. sur la vaccine, 3<sup>e</sup> édit., p. 884.—Fine. Obs. sur une éruption particulière survenant pendant le cours d'une vaccine (Journ. de méd., chirurg. et de pharm., t. i. p. 513).—Vide Vaccinia.

<sup>10</sup> Bateman. Delineations of cutan. diseases, Pl. 33, fig. 2.

<sup>11</sup> Wichmann. Beiträge zur Kenntniss des Pemphigus, etc. Erfurt, 1790.—Mouton. Observation sur une maladie vésiculaire, t. xliii. p. 41.—Robert de Langres. Mém. sur le pemphigus (Journ. de méd. et de chirurg., t. xxiv. p. 26).—Asdrubali. Archives gén. de méd., t. xvii. p. 601.—Bielt. Journ. hebdom., t. viii. p. 46.

<sup>12</sup> Jacquemin. Obs. sur une maladie singulière de la peau. (Journ. gén. de méd., t. xxx. p. 264.)

<sup>13</sup> Macbride. Méthod. Introduct. to Medicine, 4to. Dubl. 1772.

<sup>14</sup> Stokes. Annal. de littérature médic. étrangère, an. 1810, Septemb. p. 225.

<sup>15</sup> F. Thierry states that, in 1736, there reigned at Prague a contagious and very fatal disease among the soldiers. The bullæ that rose upon the skin were as large as a hazelnut, and were very similar to the phlyctenæ caused by blisters (Médecine expérimentale, p. 134, 12mo. Paris, 1755). Langhans, under the title of pemphigus *Helveticus*, has described a disease that reigned in Switzerland in 1752 (Acta. Helvet., vol. ii. p. 260). It is difficult to say whether these epidemics ought to be considered as a severe species of acute pemphigus which does not now occur, or referred to a dothineritic affection with eruption of bullæ on the skin, a disease of which I have met with several cases.

<sup>16</sup> Frank. Epitom. de cur. hom. morbis, lib. iii. p. 261.

<sup>17</sup> Bateman. Synopsis of cutan. diseases, 1829, p. 197.

<sup>18</sup> Oslander. Denkwürdigkeiten fuer die Heilkunde und Geburts-huelfe, B. I, St. 2.—Lobstein. Journ. complém. des scienc. médic., t. vi.—Hinze. Sur le pemphigus des nouveau-nés. (Bull. des sc. méd. de Férussac, t. xi. p. 47.)

<sup>19</sup> Bunel. Diss. sur le pemphigus, in-4, p. 13. Paris, 1811.

<sup>20</sup> Rec. pér. de la soc. de médec., t. ix. p. 55.

<sup>21</sup> Ozanam. Hist. des malad. épidémiques, t. v, p. 208.

<sup>22</sup> Recherches et observ. sur le pemphigus, son histoire et sa synonymie. (Recueil périod. de la soc. de méd. de Paris, t. liv. p. 1.)



noticed until I described it, pemphigus *circinnatus*; a third, pemphigus *infantil*, differs so essentially from the other varieties of the disease, that Bateman, who has pointed out its characters but very imperfectly, was led to look upon it as a species of rupia. The others, also, have all some remarkable peculiarity to distinguish them.

CASE XXVI. *Acute pemphigus, with simultaneous eruption of bullæ on the right forearm; annular erythema; herpes phlyctenodes.* A. B., twenty-three years of age and unmarried, had menstruated regularly since she was twelve years old. Had come to Paris three weeks ago, and entered the service of a restaurateur, where she had better food at her disposal than she had hitherto been accustomed to. No cause of moral nature appeared to have exerted any influence on the development of the disease for which she sought relief. Five days before entering the hôpital St. Antoine this young woman felt such a sensation of itchiness in the lower part of the right forearm, and in the hand of the same side, as would have led her to scratch the parts violently, had she not resisted the impulse. A number of small red spots appeared on the parts mentioned, during the existence of which the pruritus continued. These were succeeded by small blebs which gradually became larger and increased in number. The patient having now observed several red spots of a similar kind on different parts of the body, sought admission to the hospital on the 21st of August. The right forearm and hand were both found evidently swollen, and considerably hotter than the same parts of the opposite extremity; they presented several red points of a very small size, numerous bullæ, excoriations, incrustations, whitish spots that had been covered with scabs, and a few vesicles.

The fingers alone exhibited any of the red spots mentioned; they were not numerous, pretty regularly rounded, of the size of a small lentil, and disappeared momentarily under pressure; bullæ varying in size from that of a pea to that of a hazelnut were scattered over the lower part, and especially the inner surface of the forearm; they were pretty closely crowded together; from twenty-five to thirty could be counted in a space scarcely so large as the hand. They were generally very regular in their shapes, and as large at first as they became at any subsequent period; some few, however, evidently, increased by the extension of their circumference. Those which were irregular in their outline, were so evidently in consequence of being formed by the fusion of several bullæ together, which, thus conjoined, assumed the form of the figure 8, or appeared like a string of beads. They were almost all without areolæ; some, however, were surrounded by a very conspicuous border. Through several of the most transparent bullæ the rosy colour of the cutis vera could be perceived. The want of transparency in others seemed to be owing to the formation of a very thin layer of whitish matter on the surface of the corion. The oldest bullæ had become perfectly opaque either in consequence of the formation of pus, or of the great thickness of the false membrane they contained.

There were but a very few excoriated places consequent on the abrasion of the cuticle. Here and there a few incrustations and cuticular laminae, proceeding from the drying up of the blebs, were conspicuous. All of these adhered strongly to the skin; several consisted in fact of nothing but a circular lamina of cuticle, which, after having been soaked with the yellowish serum or purulent fluid of the bullæ, sank down on its evacuation and became applied anew to the surface of the corion. These circular laminae, usually of a yellowish-brown colour, were continuous with the healthy cuticle at their circumference. Others of the scabs were more complicated in their structure, and consisted, besides the cuticle, of a true, yellowish, rounded scab, half the size of the superposed cuticular lamina itself, and here occupying its centre, there one of its segments. These laminae and scabs were generally thrown off in a single piece, and exposed the last traces of the disease, which consisted in rounded and not very numerous marks of the same size as the crusts that had been detached, and of a dull white colour, which formed a marked contrast with the natural rosy tint of the skin. A few crusts of the kind now described, existed on the fore part of the trunk. Besides these various organic changes, which were all proper to pemphigus, an erythematous patch was perceived in the form of an oval circlet perfectly regular in its outline, the centre being occupied by healthy skin. This ring was not covered by any vesicle.

The skin covering the lower halves of several of the metacarpal bones, and first phalanges of the finger, was beset by a great number of vesicles, the size of a small pin's head, or of a split pea, here and there isolated, but in general congregated into irregular clusters. Several of these were surrounded by a border of a deep red colour. The general health of the patient was good. She was put upon diluents and spare diet,—lemonade and the quarter hospital allowance.

23d.—Several bullæ which last evening were distinct had become joined by their edges and now communicated with each other; a circumstance of which we were assured by making a puncture into one of them, and letting out the fluid which the whole that were so united contained. 24th.—The bullæ were all broken and covered either with the shrunk and wrinkled cuticle, or the peculiar incrustations of which mention has been made above. 29th.—No new bullæ had been developed. 30th.—A few marks, some of a dusky hue, from which the incrustations had been forcibly removed by the patient, others of a dull white, from which the scabs had fallen off of themselves, were now the only traces of the disease remaining. The patient had three-quarters of the hospital allowance, took a warm bath, and on the third of September left the hospital cured, although the circular marks on the forearm still proclaimed the nature of the affection under which she had laboured.

CASE XXVII. *Chronic pemphigus; bullæ arranged in bands; complication with herpes circinnatus;* Grainprot, sixty-eight years of age, entered the hôpital St. Antoine on the 13th of August, 1828; of a naturally good constitution, this man had been living in the country during the last two months, and was habitually employed in gardening. In the month of June, 1827, when the heat was excessive, he states that he had the first attack of a disease similar to that under which he now labours, and from which he then recovered completely in five weeks. In the same month of the present year (June, 1828,) a new eruption of bullæ showed itself, first on the wrist, and subsequently on other regions of the body. On the 15th of August they presented the following characters on the right arm: 1st, prominent red spots of various forms; 2d, bullæ in different degrees of development; 3d, incrustations; and 4th, certain alterations that did not appear to be owing to the pemphigus.

The spots were flat on the surface and of a deep red colour; they varied from the size of a split pea to that of a shilling; they were slightly raised above the level of the surrounding skin, and disappeared for an instant when pressed on by the finger. They were distinct in several parts of the extremity, crowded together in others, and occasionally ranged one after the other, so as to resemble in some sort irregular curved bands of different breadths, some being but a few lines and others much more across. The red borders, with which these bands were furnished, terminated sharply in the healthy skin on the convex aspects, but on their concave edges they were gradually diffused and lost in the areola with which the bands were on this side surrounded. This arrangement, however, was not universal; and the bands in various places included patches of apparently healthy integuments within their concavity. The red patches generally, were sensibly hotter than the neighbouring parts, and at a subsequent period became covered with bullæ.

The disposition of the bullæ corresponded in general with that of the red spots and bands; in other instances they surrounded the incrustations about to be mentioned, and then they were much more minute. They varied in size from that of a split pea to that of a hazelnut. Some of the bullæ were transparent; but in general, they were opalescent; almost all contained limpid serum and a false membrane of a dirty white colour, occasionally tinged with infiltrated blood, an appearance which was conspicuous in even the most recently formed bullæ.

The greater number of the bullæ were full and tense; others of older date were shriveled, and looked as if a part of the fluid they contained had been absorbed.

If the bullæ were opened, their contents evacuated, and the false membrane, generally included, detached, the surface of the corion appeared of a rose colour similar to that of the primary patches on which the bullæ were themselves evolved.

The scabs or incrustations, of the same dimensions as the bullæ to which they had succeeded, were like these, now isolated and distinct,



now congregated in stripes. They were of various hues, from a yellow to a deepish brown, adherent to the skin, of considerable thickness in their centre, but much thinner towards their circumference, where they were squamous and consisted of the cuticle alone. If they were detached, the red surface of the corion was exposed, generally dry, but now and then smeared over with a little sero-purulent matter.

Besides, the organic alterations, now described, proper to the disease that immediately occupies us, a number of perfectly transparent vesicles of the size of large pins' heads existed on the right arm, mingled with the bullæ of the pemphigus. A large phlyzaceous pustule with a hard and red base, the centre of which was covered by a brownish scab, was also developed on the outer aspect of the forearm near the elbow joint.

The *left arm* also exhibited the eruption of pemphigus in all its stages; and here the stripes or bands sometimes appeared completely annular, including circular portions of healthy skin; this appearance was even more frequent on several parts of the body. The bullæ on this as on the opposite extremity were very numerous, and although completely transparent, included almost universally a false membrane, which, in the older ones, either presented spots of a dull white, or the sanguinolent infiltration of which mention has been made.

It was on the right lower limb that the elevated red bands were most completely beset with bullæ. One of these bands pursued the following course: from the level and vicinity of the trochanter major, it passed obliquely inwards towards the scrotum; turning back, it descended along the thigh to the fore part of the knee, which it surrounded in an imperfect manner; it then mounted, winding as it advanced along the outer aspect of the thigh, till it attained the point from which we have traced it as commencing. This long band was made up of several smaller ones, which represented arcs of circles of various diameters. The area which this band circumscribed was occupied by healthy skin, beset here and there with red patches covered with blebs and vesicles. It was in the course of this great band so particularly described that the largest bullæ of the pemphigoid affection were encountered; so that this belt of bullæ bore the most striking analogy to the groups of herpes *circinnatus* which existed on the other thigh and especially on the trunk.

The bullæ were more numerous on this extremity than anywhere else. Attacked more recently, it exhibited none of the incrustations described as existing on the arm, but it presented a new feature not observed elsewhere, namely a number of *excoriations*, the dimensions of which varied between that of a sovereign and a double sovereign piece. They were all superficial, the corion being destroyed in no one of them.

The *left leg* exhibited no bullæ, but in different places it presented several circular red bands which completely circumscribed portions, greater or less in extent, of healthy skin; the diameters of these varied between that of a silver two-penny piece and that of a shilling. These rings were almost all covered with transparent vesicles the size of large pins' heads or small lentils (*herpes circinnatus*).

The herpetic groups, well characterized in the region I have just mentioned, were still more so on the trunk. One was seated below the left breast, four on the epigastric, and many more on the hypogastric region; they were, however, more numerous on the back than anywhere else. Three groups in this region placed one over the other, and joined by their edges, formed an elevated band between two and three inches in length, by six or eight lines in breadth, which presented three different circular patches of healthy skin; the centre of one of these groups was occupied by a crust of ecthyma, more prominent than the red line by which it was surrounded; a boil of considerable size was observed in the centre of a cluster situated over the right scapula.

The pemphigus at length also appeared on the upper part of the throat and on the chin; here the blebs were less regular; the serum they contained became more speedily turbid; and the scabs were thicker, and longer of drying than in other situations. Further, the hair-follicles of these regions inflamed and poured out a thick matter of a yellowish-green colour, which concreted into crusts, like those of impetigo. The other parts of the face, and the hairy scalp continued free from eruption.

All the parts affected were hot, and troublesome sensations of itchiness and smarting were complained of, especially in those points that, within a few hours afterwards, became covered with an eruption of blebs. These symptoms were so much the more violent as the eruption proved copious, or was actually confluent; they were scarcely felt in the right arm, which was the part first affected.

The general state of the patient was rather satisfactory; the thorax and abdomen were not affected; the intellect alone seemed weakened, and the patient had long been in a state verging on fatuity. (*Lemonade for drink, gum julep, and broths and soups for diet, were ordered; and the excoriated parts were dressed with simple cerate.*)

During the few first days Grainprot remained in the hospital, new bullæ were successively thrown out, especially on the legs and trunk; but they always appeared upon prominent red blotches, which, isolated at first, soon united into the raised bands I have mentioned, and changed their shape. On the 20th, bread, gruel and vegetables were added to the diet, and a few cups of herb-broth (*bouillon aux herbes*) were taken during the course of the day. By the 22d, the original elevated bands which presented themselves the preceding days on the right thigh, were no longer visible. But new blebs, thrown out on spots prominent like the others, and assuming the same arrangement in bands, made their appearance on the left thigh. The circular clusters increased in number on the dorsal region, which here and there presented bullæ, mixed with vesicles evolved on the spots themselves. The patient complained of having had two loose motions the preceding evening.

The red spots were more numerous than ever on the 23d; on the inner side of the thigh an immense bleb, nearly as large as a crown-piece, its base surrounded by a red border which was well defined and distinct from the healthy skin in its neighbourhood, made its appearance. *A grain of tartrate of antimony was now added to the lemonade, and the quantity of food formerly allowed was diminished by one half.*

On the 25th, the erythematous rings, and round vesicular groups, were so greatly increased in number that the primary form of the inflammatory affection was masked. On the dorsal region, however, several circular clusters were still visible, which, uniting together, composed various figures, among which, many of the figure 8 were very distinct. The diarrhoea had increased; the patient had lost flesh since his entrance into the hospital, and during the last two days, the pulse had become quick: the prognosis was less and less favourable. On this day the patient was induced to leave the hospital, and it is with regret I have to state, that no further information could be obtained as to the issue of the serious disease under which he laboured.

It is worthy of remark that this patient had been for two years successively affected with pemphigus; on each occasion, too, during the hottest months of the year, and that it was only on the second attack that the eruption became general.

CASE XXVIII. *Chronic Pemphigus presenting isolated bullæ, and clusters of an eruption similar to that of herpes phlyctenodes; amenorrhœa; recovery.* Frances Richard, 42 years of age, and of a good natural constitution, had for some years past been subject to slight but frequent indispositions. The menstrual discharge had been almost always irregular and scanty; she was married at about twenty-two, and had had three children, who all died young. For fourteen years she had laboured under profuse leucorrhœa, the consequence of a clap. About five months ago, on the return of a menstrual period, she had a shivering fit, which lasted several hours, and was followed by febrile symptoms. Two days afterwards leeches were applied to the thighs; the menses did not recur, and an eruption of bullæ, which appeared singly and in groups, came out successively on the thighs and trunk, and on the fronts and insides of the arms. The pruritus was excessive, and was increased by the warmth of the bed. The patient was brought to the hôpital St. Louis, where she remained during several weeks under treatment, by means of baths of the decoction of bran, lemonade and sulphur pastiles. She left the house without benefit, passed some time at her own home, and obtained admission into the hôpital de la Charité on the 6th of March, 1833.

The upper extremities, especially the forearms, on their inner and anterior aspects, are covered with irregular groups of round, convex, semi-transparent bullæ, the size of a pea, or larger, filled with a thin



and limpid fluid, separated from each other by very small spaces, in which the skin looks red and injected; in some places the bullæ join each other by their edges. Here and there, especially on the upper lip, inner aspect of the thighs, and lower part of the lumbar region, a few isolated bullæ are to be seen. The bases of these isolated bullæ are here sharply circumscribed by the healthy skin, there surrounded by a red circle, which is visible about all that occur in clusters. When the serum is evacuated and the cuticle is removed, the subjacent dermis appears reddish, granular, moist, and but little inflamed. The patient having acquired the habit of pricking the blebs as soon as they appear, very few have been allowed to run their natural course, yet here and there scabs, formed by their contents, become dry, are to be met with; these crusts are of rather a lightish brown colour; they are prominent, slightly conical, granular, unequal at their bases, and adhere pretty firmly to the skin, which appears either slightly excoriated, or merely red. In other places the crusts are thinner and plain, or only very slightly convex; to conclude, no other traces of bullæ remain in some places than a few slight epidermic exfoliations of a circular shape, adhering by one of their edges and covering reddish or brownish spots; these spots are most numerous above the right buttock.

The bullæ always appear in successive crops, and the patient has fancied that she could perceive the skin of the places where they were about to appear to become redder than natural, and to be affected with considerable pruritus; each bulla rapidly attains its largest dimensions; the itching is especially troublesome when the body becomes heated, by being warmly covered in bed, for example.

The skin of the front and inner parts of the forearms, no point of which has escaped being the seat of bullæ at one time or another, appears to be thicker than natural. The principal functions of the body, respiration, digestion, and circulation are performed with perfect regularity; but the patient has had no return of the menstrual flux for several months. (*Barley water, with half a drachm of nitric acid; carbonate of iron, in doses of twenty-four grains.*) The bowels had been constipated, but were relieved by two cold glysters.

March 9th.—Several bullæ on the forearm were touched with a solution of nitrate of silver; sharp smarting pains during the day; eruption of new bullæ to which the caustic solution was also applied. 10th and subsequent day.—The same medicines were continued; great numbers of bullæ appeared around the parts that were cauterized. On the 20th the use of the warm bath was begun, and regularly continued every day till the 1st of April, at which date the dose of the carbonate of iron had been carried the length of thirty-six grains daily.

The thighs now presented but a few isolated bullæ; the daily eruption on the forearms, though it still took place, was much less in amount than formerly. Alkaline baths were prescribed, each containing four ounces of carbonate of potash; of these the patient took six in the course of eight days, but without any great benefit from their use.

On the 8th the menses appeared for the first time during the last five months and flowed but scantily for two days. On the 12th, without any evident or known cause, the patient was affected with febrile symptoms for which blood-letting was deemed necessary and prescribed, although it was not practised; by the 14th the fever had very much abated. The skin complaint now showed a great change; the bullæ were no longer transparent, but were filled with a sero-purulent fluid; the skin of the forearms was greatly flushed, and the itchiness had given way to a sense of smarting. The patient took seven gelatinous baths, and internally a cup of decoction of endive, with the addition of two drachms of sulphate of soda occasionally. On the 21st the patient was much better, and no new eruption of blebs had occurred. Half a drachm of the solution of arseniate of soda<sup>1</sup> was now prescribed, and the dose afterwards carried to a drachm. The patient bore the medicine well; no new bullæ appeared, and the skin showed no symptoms of inflammation. The cuticle on the forearms began to be thrown off. On or about the first of May, a cluster of very small bullæ was observed in the bend of the arm; these contained but a very small quantity of serum, and disappeared at the end of a few days, without being followed by any more. The same medicine

continued. On the 8th the menstrual discharge set in and proved more copious and lasted longer than it had done for several years.—On the 15th the patient was discharged, and promised to return should her disease recur. She still continued well on the 15th of July.

CASE XXIX. *Pemphigus infantilis; ulceration of the skin; gastro-intestinal inflammation.* P. Francoise, weakly in constitution, seven months old, and already weaned three, was brought by the mother for advice on the 7th of July, 1828. Six weeks previously the infant had had an attack of ophthalmia, which got well without any treatment, and was speedily followed by a very remarkable disease of the skin, which appeared successfully on the chin and neck, and on the fore and back parts of the body. The different appearances that characterize it seem to form parts of the same malady, which, according to the mother's account, showed itself almost simultaneously on the different parts now affected, and without being preceded by any peculiar symptoms.

This eruption consists of round bullæ in different stages of red excoriations, circular in form, humid, and almost uniformly ulcerated in their centres, and of a few scabs which present peculiar characters.

1. The bullæ are pretty regularly round, the size of a large lentil, almost always distinct, and scattered over the surface of the trunk, but here and there congregated into irregular groups, especially upon the back, when they are surrounded by an areola, which disappears with pressure. The fluid of the bullæ is opalescent and escapes when the cuticle is removed. The surface of the corion where exposed looks red, and the centres of the spots are almost always occupied by a small grayish-coloured ulcer, much inferior in extent to the excoriation itself. This small central ulcer, which might be covered with the head of a pin, corresponds to a point of the skin which is softened and infiltrated with a drop of purulent matter.—These hemispherical bullæ with the ulcerated centres, had already lasted several days when they were examined.

2. The excoriations consecutive to the bullæ, when deprived of their cuticular covering, almost all present a central ulcer, which is generally larger and deeper than in the bullæ just laid open. When the bullæ have been crowded, these remaining sores have occasionally spread into each other and formed small ulcerated bands, very analogous in appearance to those met with in some forms of syphilitic skin disease. The ulcers are of various depths, some penetrating through the whole thickness, others implicating no more than the superficies of the corion; they are uniformly surrounded by red areolæ.

3. A few incrustations are observed here and there, between the bullæ and the ulcerated parts. They look about the size of the original bullæ, are yellowish in colour, of no great thickness, and adhere to the skin; some of them have a slight depression in their centre of a lighter yellow, and corresponding to the seat of the little ulcer of which mention has been made. All the parts affected appeared to be very painful.

Besides the skin complaint, the belly of the child has, according to report, been tense and voluminous for several weeks past; the tongue is slightly red, and there is rather a profuse diarrhœa. *The sore places were dressed with fine linen spread with cerate, and protected with soft lint; demulcent drinks were ordered, light nourishment in smaller quantity than usual, and emollient baths.*

13th July.—New bullæ have arisen; several are of very recent date, and appear opalescent, not in consequence of the nature of their fluid contents, but from enclosing an opaque false membrane of a yellowish-white colour. When this exudation was removed, the papillary surface of the dermis looks as in the older bullæ, of an uniform red colour, but the centre instead of a true ulcer, only presents a small whitish spot, which, however, marks the point that at a later period was to become the seat of ulcerative absorption.—The bowel-complaint had ceased. *Same treatment.*

15th.—No new bullæ have been developed, but many of the old ones still continue; the skin, indeed, over the scapulæ and lower part of the left side of the thorax, is almost of one uniform red tint from the conjunction of the areolæ that surround each of them or the consequent excoriation. These parts seemed also to be very painful. Four leeches were applied to a portion of healthy skin that occupied

<sup>1</sup> This solution is the *liqueur de Pearson* of the French. It consists of one grain of the arseniate of soda, in one ounce of water.—R. W.



nearly the centre of a group on the left shoulder-blade, and the former dressings and demulcent drinks were continued.

20th.—The little patient appeared greatly better; there were now no more than three groups of ulcers on the lower parts of the chest. The scabs that have been detached from the single bullæ have left small isolated and depressed cicatrices; those that have followed the ulcerated bands are tortuous and irregular, and seen, for the first time, might very readily be ascribed to a very different cause than that to which they are due. By the 24th of July there were no symptoms remaining of the bullous inflammation with which the infant had been affected; but on this day new signs of gastro-intestinal irritation were exhibited; these, however, were successfully subdued by means of a warm bath and other soothing remedies.

CASE XXX. *Chronic pemphigus of both legs, recovery under the use of arsenical preparations; subsequent insanity.* M\*\*\*, nearly fifty years of age, was very ill in April, 1827. He then had sinapisms applied to his legs, which caused considerable inflammation, followed by some discharge, which continued for nearly two months. M\*\*\* had occasion to travel to the south, and about the month of October, the legs, especially the calves, were attacked with chronic pemphigus, characterized by the eruption of bullæ six or eight lines in diameter. Baths and emollient poultices, saturnine and sulphureous washes, were employed one after the other, without success. On returning to Paris on the 1st February, 1828, I was consulted. I found the disease principally seated in the posterior, outer, and fore parts of the right leg; every point, however, was not affected in the same manner, nor in the same degree. I remarked, 1st, rounded, reddish eminences, the size of a French bean, which were painful and firm to the touch, and looked like flattened tubercles; these elevations were the eruption in its first stage. Next day the eminences were changed into true bullæ, filled with transparent serum. 2d. Several bullæ, here at their height, round, and distended with transparent serum, there sunk down and flaccid, or ruptured, and empty. 3d. Flat, laminated and yellowish scabs proceeding from the drying up of the bullæ. 4th. Red and bleeding excoriations, some circular like the distinct bullæ; others of different forms and broader, consequent on the junction of several contiguous bullæ. Some of these excoriations had the appearance of recently blistered surfaces, others that of a blistered part covered with a white or shriveled membrane. 5th. Between these different morbid changes, the skin was reddish in some places, and in others preserved its natural appearance. The inflamed parts were not very hot; the pain only came on in paroxysms, and was excited by any attempt at walking, which, indeed, was nearly impossible; the patient consequently kept his room. He called my attention to the circumstance that the painful paroxysms came on principally during the night, and that each new eruption of bullæ was preceded by violent pains in the calves. Speaking of the pain he endured, M\*\*\* expressed himself nearly in the same terms as individuals use who are affected with bad shingles. The right leg was swelled, and infiltrated inferiorly. On the left leg alterations of a similar kind, but much less violent in their character, were apparent.

The digestive organs were unaffected; the bowels, however, were obstinately constipated, occasionally for four or five days at a time, despite the repeated use of lavements. The kidneys performed their office perfectly; there was nothing amiss with the functions of respiration and circulation. The nervous system alone seemed affected. M\*\*\* was excitable, very irritable, contentious, and eccentric; he also occasionally complained of a sense of heaviness in the head.

I directed the legs to be dressed with pledgets spread with saturnine cerate, and covered with soft lint, as if they had been affected with vesications after a scald. At each dressing the lint was carefully detached after being well wetted with decoction of althea; every other day the patient took a gelatinous bath, and each day he drank a considerable allowance of veal broth. Under this treatment, which was continued for nearly three weeks, several bullæ dried up and were replaced by others; the patient was alternately better and worse. Almost regularly after coming out of the bath, the legs became more distended, and after this afflux there was an evolution of one or several bullæ: the patient consequently soon went into the bath with reluctance, as the skin only seemed to become more tender under its influence. A blister had already been applied to the arm, and I now put

the patient on the use of phosphate of soda, and then of calomel in purgative doses, but without deriving any benefit from the measure. Twenty leeches were next applied to the right leg, and this step was attended with more harm than good, the bites becoming inflamed, and suppurating without any sensible amelioration in the state of the affected parts.

The obstinacy of the disease, and the good state of the digestive organs made me resolve on trying the solution of arseniate of soda, and the patient was put upon doses of this preparation, successively increased from six to eight, ten, fifteen, twenty-five, and thirty drops. There was a manifest improvement from the time that the doses of twenty drops were attained. The legs were completely cured at the end of a month, under the influence of the medicine, which, however, was continued for a fortnight longer. Besides its effects upon the disease, this medicine caused some slight derangement of the digestive functions, but not to the extent of colic, or diarrhœa, or vomiting; it also induced a slight puffy state of the countenance, with several erythematous blotches on the fingers. These inconveniences ceased of themselves on the use of the remedy being discontinued.

At a later period this patient, who for a long time back had been observed to be *very eccentric*, was attacked with mania. After several bleedings had been practised without doing any good, M. Esquirol and I agreed to try the effect of a succession of blisters upon the parts that had been affected with pemphigus. These applications made no impression on the disease of the brain, which degenerated into dementia, and two years afterwards the patient died paralytic.

#### RUPIA.

Vocab. *Rupia, Ulcers-atic.*

299. *Rupia* is characterized by small isolated, flattened bullæ, filled with a serous fluid which soon becomes opaque, puriform, or sanguinolent, and to which succeed black, thick, and prominent scabs, whose bases conceal ulcers of variable depths. Three varieties are observed: *rupia simplex*, *rupia prominens*, and *rupia escharotica*.

300. *Symptoms.*—*Rupia simplex* is commonly evolved on the legs, sometimes on the loins and thighs, and more rarely on the other regions of the body. It is proclaimed by one or more flattened bullæ about the size of a shilling, which at first contain a serous and transparent fluid. This fluid, however, soon becomes turbid and purulent, it then grows consistent, and is finally transformed into scabs of a chocolate colour, thicker in their centres than around their circumferences, their outer layer being continuous with the epidermis, which appears detached by the serum or pus in which their edges are bathed. Under these scabs, which are detached naturally within a few days, or are accidentally rubbed off, the true skin is found to be excoriated. This superficial sore, left to itself, either heals up, or is covered with another scab, which falls off at a later period, and this process may be repeated several times successively. After cicatrization is accomplished, the skin retains for a very long time a livid, deep red colour.

In *rupia prominens* the bullæ are larger, the succeeding scabs thicker and the consequent ulcers deeper. Each bleb is preceded by a circular red spot, over which the cuticle is slowly raised by a blackish-looking, thick fluid, which soon concretes, and gives occasion to the formation of a scab, whose thickness and size increase for some days afterwards. The circumference of this incrustation is surrounded by a reddish border a few lines in breadth, the epidermis of which is raised by a fresh effusion of serous fluid, that forms a new incrustation, and adds to the extent of the one originally produced. The areola also spreads slowly around the base of the scab first formed, which itself increases in breadth and thickness during three or four, and sometimes even during seven or eight days. The scab then appears very broad in comparison with its thickness, and is often very aptly likened to an oyster shell. More commonly, however, the incrustation projects in the same degree as it spreads, becomes conical, and bears the greatest resemblance to the shell of the limpet. The scab of *rupia* generally adheres firmly, and can only be detached with the assistance of moist and emollient applications. The skin once exposed, appears ulcerated to an extent and depth that vary in



every instance. If the part affected remain exposed to the air, a new crust is either formed after a greater or shorter interval, or the ulcerative process extends more deeply, and spreads till it sometimes approaches the size of a crown-piece in breadth; the sore in this case looks pale, and bleeds readily. These ulcers, which are usually characterized as *atonic*, and the cure of which is only obtained with extreme slowness, are always succeeded by cicatrices, subject to break open afresh, the brownish livid hue of which continues for a very long time unchanged.

3. *Rupia escharotica* is evolved more especially in cachectic infants, and occasionally in elderly persons, or in adults who have suffered from chronic rheumatism, or constitutional syphilis; it is most usually seen upon the legs, the thighs, the scrotum, the abdomen, the loins, the neck, the upper part of the chest, and but very rarely on any part of the upper extremities. It begins by one or two red and livid spots, over which the cuticle is soon raised by the effusion under it of a serous or sero-sanguinolent fluid. These bullæ go on increasing in an irregular manner; the serum they contain becomes turbid, and acquires a blackish colour. By and by they give way, and the dermis, left naked, appears ulcerated, softened or gangrenous in different points; a bloody and very offensive sanies bathes the surface of the sore, the edges of which are livid and not very painful. In adults I have seen *rupia escharotica* acquire the dimensions of *rupia prominens*, and small portions of the skin and cellular substance, stricken with sphacelus, become detached slowly from the surface of the ulcerated parts. In children the bullæ of *rupia escharotica* do not generally acquire so large a size, but they follow each other in greater numbers; the succeeding sores become very painful, cause fever and sleeplessness, and may exhaust the patient in the space of two or three weeks. In every case the cicatrization of these sores is a very tardy process, and is always expected long before it happens. Ecthyma is a form of cutaneous disease that is often seen along with *rupia simplex*, but very rarely with *rupia escharotica*. I have seen many cases of *rupia* complicated with purpura and with chronic rheumatism, as also in individuals labouring under constitutional syphilis.

301. *Causes*.—Scrofulous children, and the offspring of the poor, of delicate constitution, or who have been weakened by previous illness, are predisposed to *rupia*. The disease shows itself particularly during the winter season among such as are insufficiently clothed, badly lodged and ill fed, more especially after any other form of inflammation of the skin, such as variola, scarlatina, measles, &c. I have seen *rupia*, as just stated (300), complicated with purpura hemorrhagica. The disease also frequently appears among the aged, though those in the vigour of life are by no means exempt from it.

302. *Diagnosis*.—The small flattened bullæ of *rupia* very commonly contain a turbid serous fluid. They cannot be mistaken for the large transparent and prominent blebs of pemphigus. Besides, the rough, thick, and often prominent scabs of *rupia*, and its succeeding ulcers, are very different and easily distinguishable from the laminated incrustations and superficial excoriations of pemphigus. Yet the pemphigus *infantil*, in which the skin often appears ulcerated in the centres of the blebs, seems in some sort to form the link of connection between these two diseases. *Rupia* differs from ecthyma in its primary form, which is bullous, whilst that of ecthyma is pustular; the base of the pustules of ecthyma is much inflamed, and the scabs, with which they become covered at a later stage of their progress, are hard, and, as it were set, or encased within the substance of the skin; the circumference of the bullæ of *rupia* does not present the same degree of inflammation, and their incrustations are much broader, more prominent, and less adherent than those of ecthyma. It must be allowed, however, that the bullæ of *rupia* become purulent very quickly, and that occasionally the diagnosis is rendered so much the more difficult, as the two eruptions are met with at one time in the same individual. Nevertheless, the prominent incrustations, and the deep, and often intractable ulcers of *rupia* are very different from the impacted scabs and slighter sores of ecthyma. It does not seem possible that *rupia escharotica* can ever be confounded either with anthracosis, which is surrounded with a broad erysipelatous base, or with frost-bite of the hands and feet presenting bullæ and gangrenous spots.

303. *Prognosis*.—*Rupia* is never a dangerous disease; the *escharotica* species itself is only serious when the eruption is very abundant.

When the disease appears on the legs it is always succeeded by intractable ulcers. The duration of the disease cannot be precisely calculated, but depends greatly on the age of the patient, the number and size of the bullæ, on the consequent sores, the degree in which the general constitution is affected, and the influence which certain concomitant maladies, such as scrofula, and chronic affections of the lungs and alimentary canal, may exert on its progress.

304. *Treatment*.—The treatment of *rupia* is of a general and local nature. The object proposed by the first is to bring about a modification of the constitution acting faultily in a greater or less degree. The milk of a good nurse for infants at the breast, exhausted by hunger, and in misery, through want of proper care; a nutritious meat diet—beef or mutton, and generous wine mixed with water for children and adults of lax fibre and a scrofulous habit; a regimen adapted to any form of concomitant disease, if the general health has suffered,—such, in a general way, ought to be held the objects of primary and highest importance. (a)

The local treatment may be as follows:

The bullæ of *rupia simplex* are to be opened if they contain serum, and the parts covered with a soft rag and some lint, the dressings being kept in their places by proper bandages.

After the fall of the scabs in *rupia simplex* and *rupia prominens*, the ulcerated skin is to be bathed with decoction of althea if it be painful; but if the inflammation appear indolent and below the pitch requisite for the production of a new epidermis, or the formation of a cicatrix, it may be stimulated with a wash of wine and water, or a weak solution of cream of tartar. I have been in the habit of ordering the sores of *rupia* to be dusted with cream of tartar, and of all the topical applications I have tried, this is the one that seemed to me to answer best. (b)

Rest, the horizontal posture of the body and limbs, and continued gentle pressure, assist the cicatrization of the ulcers. Sticking plasters may be employed in some cases where the legs are affected, and the blebs are isolated or few in number; but whenever the round shape of the ulcers is modified, it is proper to change the adhesive straps for a perforated rag and a compress of lint, maintained by a proper bandage. If the adhesive plasters be continued too long, the parts almost always grow livid and fungous, a state that requires the repeated application of escharotics. The best of these, when they do become necessary, is the nitrate of silver, and the use of this is often followed by good effects. In some cases the nitric or muriatic acid, or the acid nitrate of mercury may be advantageously employed.

When the eruption extends to several regions of the body it will be necessary to resort to alkaline and sulphureous baths of regulated strength, alternating these with the simple warm bath.

To cleanse the skin and get rid of the incrustations, as also to enable us the better to ascertain the state of the excoriations, I make it almost a general rule to order a warm bath for the patients we receive into our hospitals. For scrofulous subjects a sulphureous bath is usually substituted, and this is had recourse to again from time to time during the treatment.

#### Historical Notices and particular Cases.

305. There are but few individual cases of *rupia* recorded; yet the disease is perhaps more common than pemphigus. If it appear less familiarly known to practitioners, it is because the bullæ that characterize it are always few in number, and soon replaced by scabs and excoriations which have been described by many surgeons as *atonic* or *incrustated* ulcers, &c. Willan and Bateman were the first who gave a good account of this disease; Lorry seems to have seen it.<sup>1</sup> A case

(a) Mercury has been advised in some cases; but it ought to be prescribed, if at all, as an alterative and not sialagogue.

(b) Ointments of the protiodide of mercury (a scruple to the ounce, and of the biniodide of mercury 12 or 15 grs. to the ounce) have been strongly recommended by Bielt. Mr. Wilson succeeded in an obstinate case with a strong solution of alum injected beneath the edges of the bullæ.

<sup>1</sup> "Horret sæpè cutis crustis superpositis, et rupium ad instar sese mutuo excipientibus" (Lorry. De morb. cut., p. 81). Vid. p. 76: Nasci purtulas illicò cruore plenas, etc.



has been quoted by one writer which was aggravated by the use of mercury.<sup>1</sup>

CASE XXX. *Rupia of the legs in a child.* I attended a child belonging to poor parents, eight years old, of a fair and pale complexion, and lymphatic and scrofulous habit, in whom three flattened bullæ, each the size of a six-penny piece, filled with bloody serum and surrounded by an inflamed areola, were evolved on the lower and outer part of the right leg. Two other bullæ having similar characters, were also observed on the same region of the left leg. These bullæ, which had been evolved within four and twenty hours, burst on the day I was called, and were completely emptied of their contents. The day after, each of the bullæ was replaced by a thin brown scab which adhered to the skin. (*Hopsea; bullæ dressed with saturnine cerate spread on a perforated rag: fomentations with elderflower water.*) I saw the child eight or ten days afterwards. In this interval the incrustations had been repeatedly detached along with the stockings of the little patient. The dressings had not been regularly applied, and the scabs were always reproduced. I now recommended the incrustations to be got off by means of a soft poultice, the parts that were inflamed and deprived of cuticle to be covered with a pierced rag, spread with saturnine cerate, a little soft lint, and a firm bandage above all. Within a fortnight the child got well, but the skin long retained a deep purple hue in those points where the bullæ had appeared.

CASE XXXI. *Rupia of the legs, ecthyma and petechiæ, œdema of the feet, use of the supertartrate of potash.* In the month of May, 1823, I had a water-carrier under my care for an ecthyma, the large pustules of which had principally appeared on the thighs. This man, who was in his sixty-sixth year, was pale and emaciated, and had a worn-out appearance. Ill clothed, ill lodged and ill fed, he was often exposed to cold and moisture; he had suffered several attacks of bronchitis, and repeatedly laboured under diarrhœa. When I saw him, however, for the second time on the 2d of July, 1823, he showed no signs of either gastric or pulmonary affection. He applied to me on account of three flattened bullæ, having a large and but slightly inflamed base, which had appeared on the lower and outer part of the left leg. Two days afterwards the blebs had changed into brownish incrustations, which increased in thickness for some time afterwards. Besides the bullæ six or seven petechiæ were observed, and a small ecchymosed spot on the leg, near its articulation with the foot, which was œdematous. Having no expectation that cicatrization would go on readily under the scabs, I recommended them to be removed by means of an emollient poultice, and the superficial excoriations they covered to be then dressed with a piece of linen pierced with holes, a compress of soft lint, and a firm retaining roller above all, extending from the ends of the toes to the middle of the leg. The dressings were not regularly attended to, and the patient continued to ply his ordinary occupation so long as his strength would permit him. The two excoriations became painful, bled frequently and began to spread; a month was passed in this way. The patient at last consented to lay himself up. He was supplied with wholesome food; the leg was kept in the horizontal posture during a part of the day at least; the sore places were stimulated by being powdered with cream of tartar; a firm bandage was applied and regularly changed. Three weeks had hardly passed before the œdema of the foot, the petechiæ and the ecchymoses had disappeared, and the excoriations were replaced by two livid cicatrices. A laced stocking was subsequently put on instead of the roller.

CASE XXXII. *Rupia escharotica.* A woman twenty years of age, of a lax constitution, presented herself among the out-patients at the hôpital St. Antoine, on the 22d of June, 1828, having an eschar, a little larger in size than a shilling, on the inner part of the left leg, around which the skin was a good deal inflamed, tense, shining, painful and swollen. This eschar had been preceded some days before by a large bleb, which had burst, and been succeeded by a black scab. The disease was evidently a case of isolated gangrenous rupia. *Compresses wet with cold decoction of althea during the day; emollient poultices through the night.* 24th. The eschar began to be detached from the inflamed skin in its circumference; the surrounding redness

was greatly less. 2d of July.—The eschar was detached, and the destructive process perceived not to have implicated the entire thickness of the skin in every part of the sore. Rest, and a few applications of powdered cream of tartar, caused the rapid cicatrization of the ulcer, which in this instance proved to be of a more purely local nature than rupia is in general.

CASE XXXIII. *Rupia; recovery, followed by febrile symptoms, relieved by blood-letting.* Morreau, twenty-two years of age and of a bad constitution, was admitted into La Charité on the 24th of December, 1832. When I saw him first he had been some days under treatment for a rupia, the bullæ of which had already disappeared, and been succeeded by incrustations of a brownish hue, mixed with rather prominent yellow lines. In two points of the outer and lower surface of the right leg, the removal of these scabs had exposed as many oval-shaped ulcers about four lines in breadth, by nearly six in length: these sores were of no great depth, and of a pale reddish colour.

The treatment after the 1st of January, was changed from emollients to dressings with a perforated rag and soft lint; and subsequently the sores were touched with a solution of nitrate of silver. This plan, aided by the use of sulphurous baths, hastened the cicatrization of the ulcers, which was almost accomplished by the 20th. Till this time the general health had been good; but now, without any appreciable cause, beyond the drying up of his sores, the patient was attacked with irregular shivering fits, which continued the whole day long. On the evening of the 20th, heat of surface, and a general uneasiness, wandering pains of the lower part of the chest, headache, and frequency and force of pulse were superadded. The nights of the 20th and 21st were passed without sleep. On the visit of the 21st the face was flushed, though the headache was less severe; but the sense of constriction about the chest was as violent as ever; at one time crepitation was supposed to have been heard at the base of the right lung, but further examination did not confirm the suspicion. The patient had a little cough, and the chest sounded well on percussion; he had no expectoration whatever. The tongue was moist and natural; the epigastrium and rest of the abdomen were not painful on pressure. The patient had had a motion the preceding evening; the pulse was full, bounding and frequent; the skin hot and the thirst considerable (*barley-water, low diet, venes. ad 3xii*). Evening of the 21st.—Headache less; other symptoms the same; 22d, the patient had slept for two hours and was better (*the same treatment continued*). In the evening there was a marked exacerbation. These febrile symptoms continued till the 24th, after which they declined considerably; the patient felt his appetite returning, and on the 26th he was so far recovered as to be allowed some solid food. On the 28th the patient was dismissed, cured. The ulcers of the rupia were completely cicatrized, but the skin that covered them still retained a livid or blue colour.

#### ARTIFICIAL OR ACCIDENTAL EULLOUS INFLAMMATIONS.

306. Under this head I arrange vesications, blisters and other watery blebs, produced by local and evident causes.

#### AMPULLÆ OR VESICATIONS.

Vocab. *Ampulla, Blister, Vesication.*

307. This title has been given to the blisters which arise on the hands and feet, in consequence of violent and long-continued pressure, rubbing, pinching, &c. These blisters are preceded by redness, and heat and painful swelling of the skin; a serous fluid is then effused under the cuticle, which becomes raised in the shape of a rounded bleb of variable size, the sense of touch in the part being very much obscured or altogether destroyed.

When ampullæ are the consequence of pressure, violently and suddenly applied, as when a finger is squeezed between two hard bodies, they are evolved almost instantaneously; the fluid they contain is then tinged with blood, and their colour is of various shades of red. The

<sup>1</sup> Plumbe (Sam.). A pract. treat. on diseases of the skin, 8vo., Lond. 1824, p. 156.



whole of the thick and unyielding cuticle of the heel is sometimes seen raised in one large and uneven blister, which, indeed, is only perceived by the lookers-on from the more regularly rounded figure and greater size of the part than naturally belong to it; to the patient their existence is always sufficiently indicated by the tensive and acute pain they occasion.

Left to themselves, blisters of the hands and feet disappear slowly, the serum they contain is either absorbed, or escapes by a natural rent or an artificial opening made in the cuticle. The spontaneous rupture of blisters of the heel is always very long of happening; their fluid contents become brown and exceedingly fetid, and at last flows out by small openings in the thickened, macerated and partly destroyed epidermis.

308. Blisters of the hands and feet are only liable to be confounded with those that follow burns and frost bite. To distinguish them it is enough to mount to the cause which has produced them, when their situation is not of itself a sufficient index of their origin.

309. The best mode of treating ampullæ is to prick them in several places as soon as they are formed, and thus to evacuate the serum they contain; when they are very large, it is even better to lay them open through their whole extent. When this practice is not followed in regard to blisters of the heel, they are apt to be followed by small fistulæ, from which a very fetid ichor oozes out. In this case it is necessary to remove the flap of cuticle which is detached, to apply an emollient poultice upon the exposed surface, and then to cover the whole heel with a compress, wetted with a solution of acetate of lead. The inflammation subsides in a few days and a new cuticle is produced.

## BLISTER.

310. The name of blister has been especially given to the large bullæ, now commonly produced in the practice of medicine, by the application of cantharides to the skin. This form of inflammation is so usually looked on as a *remedy*, that some may be surprised to find me here speaking of it as a *disease*. The study of blisters, in a pathological point of view, however, appears to me a subject of so much the more importance as they occasionally give rise to serious consequences.

311. The formation of the vesication of a blister is rapid in the same proportion as the irritating matter employed is more energetic in its action. The serum effused between the cutis and cuticle is of a pale straw or citrine colour, and transparent: it has sometimes, however, though rarely, the consistence and appearance of a kind of yellowish jelly. After having by a small opening evacuated the serum of a blister completely, if the epidermis be pressed accurately down, it will by next day appear to be incorporated again with the general integument, and a new cuticle will be formed under the old one, which is detached at a later period. If, on the contrary, the cuticle be removed from the blistered surface entirely, the contact of the air with the inflamed skin causes pain of so severe a kind that it is often compared to the sensation produced by a scald. After the rupture of the bullæ the skin appears injected, and covered with small red points, which probably correspond with the papillæ. When the exposed surface of the skin is systematically irritated, or a blister is kept open, the part often becomes covered with a whitish-looking *false membrane*, which cannot be removed without causing the flow of some drops of blood, and to which a cicatrix, or a new cuticle would speedily ensue, did not renewed irritation cause the formation of pus. The false membrane which is here formed is composed of fibrin like those of the serous surfaces, but it differs from these inasmuch as no traces of organization have ever been detected in it. When the skin has been long kept in a state of inflammation, it bleeds often and readily, and occasionally becomes covered with exuberant fleshy growths or granulations in the form of tubercles separated from each other by fissures. These growths are owing to a true hypertrophy of the papillæ of the skin.

Blisters may also *ulcerate* in several points of their surface: a patient at La Charité, whose forearms were paralyzed in consequence of repeated attacks of lead-colic, was treated successfully by gradually

increased doses of strychnine applied upon two blistered surfaces on the dorsal aspects of the forearms; these blisters, however, were not long of becoming painful, and then exhibited several small ulcers which appeared to implicate almost the whole thickness of the corion. I have often since made use of the strychnine in the same manner, but have not seen any similar consequence ensue.

When the ulcers have not implicated the entire thickness of the dermis, the cicatrices that follow them have a pitted appearance which recalls the natural disposition of its parts when minutely examined.

Blisters have a livid appearance and bleed readily in some serious diseases. They also occasionally become gangrenous.

The pigmentum, the sebaceous follicles, the hair-bulbs, and the hairs themselves, sometimes become unnaturally developed in consequence of the application of blisters.

Blisters often cause troublesome pruritus, pain, and sleeplessness, especially in children. They may also give rise to painful inflammation of the lymphatic glands of the axilla, neck and groin, when they are applied to the arm, nape of the neck, or thigh. The inflammation in these instances even extends to the neighbouring regions and to the subcutaneous cellular substance. Blisters of a very large size are almost always followed by some degree of febrile reaction; like burns they may excite inflammation of the digestive organs, irritation of the brain and nervous system, &c.; their application in acute diseases is almost always followed by a temporary increase in the severity of the symptoms. M. Richard has seen an intermittent fever brought on by a blister, each paroxysm being preceded by acute pain in the inflamed portion of skin. I have myself seen the same thing: having ordered the application of a blister to the forearms of a man labouring under paralysis from lead, the pain and inflammation of the skin produced a violent paroxysm of fever which was even accompanied by fainting.

Corvisart thought that the secretion from blistered surfaces might be so profuse as to exhaust the strength of some patients; the same remark has been made in reference to the discharge from extensive burns.

512. The bullæ produced by the application of blistering plasters may be distinguished by the special nature of their cause from those that follow burns and frost-bite, or that are characteristic of pemphigus. Independently of other circumstances derived from their form, situation and extent, blisters in a suppurating state, or dried up and covered with scales, differ in their mode of formation from the superficial ulcerations or excoriations, and circumscribed squamous patches which follow certain bullous and vesicular inflammations.

When blisters have been long kept open, or when they have had good effects, whether on the constitution at large, or on the progress of a local affection, they are of the number of those inflammations which it is dangerous to suppress on a sudden. Notwithstanding this, however, when the disease which induced their application is cured, if it be not *constitutional*, *hereditary*, or liable to *return*, it is proper to bring about the cicatrization of the secreting surface by dressing it either with some soothing cerate, or simply by abstaining from irritating it longer. If the intestinal canal be healthy, one or several successive doses of purgative medicine are then generally prescribed with great propriety.

Excessive growths from blistered surfaces are to be kept down by the application of some escharotic, or removed entirely with curved scissors.

Sulphureous baths hasten the absorption of the pigmentary marks produced by blisters.

*Historical Notices and particular Cases.*

313. Blisters have of late been studied in an anatomical point of view by M. Villermé<sup>1</sup> and by M. Gendrin;<sup>2</sup> Messrs. Brandes and Reimann have analyzed the fluid of the vesications;<sup>3</sup> and Broussais has satisfactorily proved that blisters employed as revellents in chronic affections of the stomach are more frequently noxious than

<sup>1</sup> Villermé. Art. fausse membrane, Dic. des sc. médicales.

<sup>2</sup> Gendrin. Hist. anat. des inflammations, t. i. p. 416, in-8. Paris, 1826.

<sup>3</sup> Bulletin des sc. médic., t. x. p. 330.



beneficial.<sup>1</sup> They may also cause ill effects in a greater or less degree under a great variety of other circumstances.

The powder of cantharides applied to the skin with a view to feign disease, may prove a cause of error in diagnosis. See Case XXXVI.

CASE XXXIV. *Intermittent fever produced by a blister*: (Richard, in the *Annales de la Médecine Physiologique*, tom. iii.) M. X\*\*\*, an officer of light troops, came under my care for wandering pains of the chest, dependent, apparently, on the fatigue induced by severe riding. There was no symptom of any considerable affection of the thoracic viscera; and the accession of a slight catarrh alone induced the patient to enter himself on the sick list. Regulated diet and demulcent drinks were employed for some time, but these not having answered the expectations of the patient, a few leeches first, and then a blister were applied to the left arm. On my return, after an absence of three days, I learned that M. X\*\*\* had every day suffered a rather violent attack of fever regularly at the same hour on each accession: I learned further that the discharge from the blister appearing insufficient to the dresser, he had taken it on him to stimulate the part by the application of fresh cantharides, and that the violent pain which followed this measure was the prelude to the febrile paroxysm.—Having no doubt of the irritation produced by the blister being the cause of the fever, I directed the application of a poultice moistened with laudanum, to the suppurating surface, and from this time the pain ceased, and the fever did not return.

CASE XXXV. *Eczema of the arm produced by a blister*. M. Ch.\*\*\*, aged thirty-two, of a sanguineous temperament, had been subject during several years, to a chronic coryza, which gave rise to an habitual and very copious discharge of a serous and mucous fluid from the nostrils. This flux was continual; so that M. Ch.\*\*\*, when he was engaged in writing, was often obliged to keep a handkerchief under his nose to catch the fluid that distilled from it. When this flux, which appeared in the first instance to have been brought on by the habitual use of snuff, happened accidentally to be suppressed, M. Ch.\*\*\*, who at other times enjoyed good health, was immediately taken with aching and a sense of weight in the head, symptoms which immediately disappeared on the return of the morbid secretion. After having tried various remedies for this inconvenient malady, M. Ch.\*\*\* resolved on applying a blister to his arm; this rose perfectly, and began to suppurate as usual on the two following days.

Several days afterwards, M. Ch.\*\*\* requested me to call on him and examine an eruption that had appeared around the blister, and caused so violent a pruritus that he found it impossible to resist scratching the parts. The inflammation extended over almost the whole anterior and outer parts of the arm. It consisted of vesicles and superficial excoriations; of the vesicles but few had escaped laceration; they were very minute, scarcely visible to the naked eye, and bathed by an abundance of yellow-coloured serum which exuded from the denuded skin. The excoriations had the precise characters of acute and ulcerated eczema,—a red uneven surface, with minute drops of blood scattered over it, and small distinct circular red points corresponding to the ruptured vesicles. The blistered surface was hot, bleeding and painful (*crum of bread poultice, with decoction of althea; cooling and emollient washes; warm bath; antiphlogistic regimen*). In spite of this treatment the eczema spread on the following days as high as the bend of the arm. The itching was intolerable. The secretion from the nose still continuing, I healed up the blister a fortnight after its establishment. The eczema, however, still continued for twenty days longer, at which period a slight redness of the skin was all that indicated its previous existence. A seton having been inserted into the neck, the flux from the nose was arrested.

CASE XXXVI. *Pemphigus simulated by the application of powder of cantharides*. Frances Bouillot, aged fifty-nine, was received into the hôpital St. Antoine, on the 6th of April, 1828, complaining of frequent fits of vomiting, pain of the epigastrium, and habitual constipation. She was put on the regimen pursued in cases of gastro-intestinal inflammatory affections, and took several doses of hemlock. Under this treatment the sickness and hæmatemesis with which it was at times attended, left her entirely, and a hæmaturia, to which she had become subject, ceased nearly at the same period. A short time after-

wards she had a pretty severe attack of erysipelas of the face, which was speedily subdued by the general abstraction of blood; but the sides of the puncture in the arm, though it had been made with a clean and sharp lancet, afterwards inflamed, and the irritation extended to the surrounding subcutaneous cellular substance. Leeches were applied, and the arm was enveloped in a poultice. Over all the parts so covered, a very plentiful crop of vesicles was soon observed to have arisen, which, bursting almost immediately after their formation, left the dermis beneath naked and exposed. This first eruption was before long succeeded by another, the bullæ of which varied in size from that of a pea to that of an almond, and only presented this peculiarity: that they either formed portions of an arc of a circle, or were too minute to be distinguished as possessing any determinate figure. These bullæ were almost always developed around the margins of the primary excoriation, which only spread in this way. The successive eruptions of bullæ had followed each other so quickly, that on the 6th of September, in spite of four bleedings of fourteen ounces each, in all of which the buffy coat was observed in as great perfection as it appears in articular rheumatism of the most violent kind, and two applications of leeches in the neighbourhood of the eruption, the excoriated surface resulting from the rupture of the bullæ, was from six to seven inches in length, by about three in breadth. Around the edges of the sore, sometimes separated from it by a narrow stripe of sound skin, sometimes touching it on one side, new bullæ of various shapes and about the size of hazelnuts, were still arising. The excoriated surface was slightly raised above the proper level of the integuments and mamillated; it secreted a considerable quantity of pus; here and there it was covered with patches of false membrane, and in other places with points of newly-formed cuticle. When the mamillated parts were pierced with a needle, or squeezed between the ends of the fingers, a small quantity of serum was expressed. The whole excoriated surface was excessively painful, and each dressing was followed by a violent shivering fit, which lasted two or three hours, and then gave way to a hot stage of some intensity. The pain came on in paroxysms, very commonly about midnight. The countenance of the patient was pale, the tongue slightly furred, the abdomen was free from all complaint but constipation. The mildest dressings were applied to the sore, the patient took the warm bath repeatedly, and the antiphlogistic treatment was enforced; nevertheless there was a fresh crop of bullæ almost every day, which was always preceded by violent pain in the arm, so that the patient, before the dressing was commenced, could predict the appearance or non-appearance of a new eruption, and even point out the places, where, in case of its having happened, the bullæ would principally be found.

At different times the sore put on a better appearance, and showed a disposition to heal, but on a sudden this favourable state of matters passed away, and our hopes were disappointed. No change of the dressings seemed to do any good, and nothing was gained by any form of lotion or fomentation.

After the 8th of October the arm was firmly rolled from the fingers to the shoulder, and the excoriation became completely skinned over, so that up to the 17th no new bullæ had appeared; but in the night, between the 17th and 18th, according to the patient's account, the pain returned with so much violence, that she was forced to undo the bandage, and next morning the parts first affected were found covered with an immense number of bullæ, of large size, and full of transparent serum. These vesications were all opened, and the roller re-applied. Several brown points being observed upon the skin when the dressings were removed on the 24th, a suspicion arose that they consisted of powder of cantharides, and on the 27th, a quantity of this article, easily recognizable by the changing bright green and brown colour of its particles, was discovered on the shoulder of the patient. The bedding being now carefully searched, two ounces of flour of mustard and a broad piece of cloth sprinkled over with cantharides in powder, were discovered. The woman, when questioned, acknowledged that she had applied these substances to excite new bullæ, undoubtedly with a view to prolong her stay in the hospital. A few days of uninterrupted watching, and the careful application of the roller, after this discovery, sufficed to heal up the excoriation completely, and to prevent the appearance of any more vesications.

<sup>1</sup> Histoire des phlegmasies chroniques, t. iii. p. 96, in-8. Paris, 1822.



314. Other causes, besides those now specified, may give rise to the development of artificial bullæ. M. Brachet informs us that he induced a pemphigoid eruption on the arm of a man affected with paralysis, by exposing it to the current, from a powerful galvanic battery. Wichmann,<sup>1</sup> and Messrs. Bourdois, Thillaye, and Guerin,<sup>2</sup> have seen erysipelatous and bullous eruptions, produced by the rhus toxicodendron and rhus radicans.

315. Lastly, M. G. Pelletan has published a case in the *Journ. de Chimie Médicale*,<sup>3</sup> in which a bullous eruption was produced on the fingers, by handling balls for poisoning rats, prepared with nuxvomica in powder, cheese and bitter almonds.

## VESICULÆ, OR VESICULAR INFLAMMATIONS.

Vocab. *Vesicle.*

316. This group is characterized by vesicles, or small serous and transparent elevations, differing from bullæ in nothing but their smaller size, and formed by a globule of serum with or without coagulable lymph, effused beneath the cuticle. These minute drops of serum may be either re-absorbed, or shed upon the surface of the skin after the rupture of the vesicles, which are succeeded at length by desquamation, superficial excoriation, or small thin and laminated crusts or scabs.

Five forms of vesicular inflammation of the skin are reckoned: Herpes, Eczema, Hydrargyria, Scabies, Miliaris sudatoria, and Sudamina; to these, however, must be added vesicular syphilis, and artificial vesicles.

317. The vesicular character of scabies has been disputed by Bateman, who ranks it among the pustular affections. The mistake he committed has been exposed by M. Bielt.<sup>(a)</sup> On the other hand, Bateman has classed vaccinia, aphthæ, rupia, and varicella, among the vesicles. But the vaccine pock is indisputably a *pustule*; aphthæ cannot be counted among the diseases of the skin; and rupia is a bullous affection. With regard to varicella, I grant that of the three or four varieties which the disease presents, severally designated under the names *chicken-pox*, *swine-pox*, and *modified small-pox*, one at least, the *chicken-pox*, is perfectly vesicular in its form; but it is also certain that the other varieties mentioned, and particularly the *modified small-pox*, are invariably pustular diseases. Varicella, therefore, by this double character, may be regarded as forming the link of transition from vesicular to pustular eruptions. Feeling myself free to attach it to one or other of these groups, I have preferred classing it among the *pustules*, with a view of approximating it to variola, of which it is a mere modification.

Vesicles are sometimes accidentally developed in the course of other diseases; but they are then few in number, and form true complications of the original malady.

318. The evolution of vesicles upon the skin is not preceded by any appreciable degree of redness in scabies, or in sudamina. On the other hand a great degree of redness precedes the eruption of herpes, eczema, hydrargyria, and sweating miliaria. It shows itself under the form of red *points* or *spots* of greater or less extent, on which the vesicles subsequently arise. The size of the vesicles in several varieties of herpes is rather considerable. In eczema, on the contrary, the vesicles are so minute that they are only distinctly visible under the magnifier. Occasionally it is even impossible to perceive that an elevated patch is vesicular without pricking it with a needle, when

(a) Justice is not done to Bateman in these observations of M. Rayer. The former defined scabies to be, "a contagious eruption of minute pimples, papular, vesicular, pustular, or intermixed according to circumstances, and terminating in scabs."

<sup>1</sup> Wichmann. *Ideen zur Diagnostik*, 1. B. p. 75.—*Nouv. mém. de l'Acad. de Berlin*, 177.

<sup>2</sup> *Gaz. médicale*, t. iii. p. 493.

<sup>3</sup> *Journ. de chimie médic.*, t. iv. p. 482.]

the escape of the serum proclaims its nature. The forms assumed by vesicles are not less various than their sizes. Those of miliaria are globular, those of herpes labialis, broad and flat, those of itch, acuminated, &c.

Vesicles may appear thinly scattered, or congregated into thickly set groups or clusters; their evolution is at one time simultaneous, at another successive, and the duration of each new crop may vary from a period of a few hours to one of several days in extent.

319. Vesicles may terminate, 1st, by the re-absorption of the fluid they contain, and a slight desquamation; 2d, by the transformation of this fluid into pus, and at a later period into thin laminated scabs, under which a new epidermis is produced; 3d, by the excoriation of the skin, which, becoming raw, first pours out a sero-purulent secretion, and then continues habitually subject to desquamation; 4th, and very rarely, by ulceration, as in zona and vesicular syphilis.

The vesicles in sweating miliaria never terminate but in the first of these modes; in herpes they often end in the second; and there is none of them in which eczema is not occasionally manifested.

The vesicular phlegmasiæ may be complicated with exanthematous, pustular, and other forms of inflammation. Two of them, itch and sweating miliaria, are contagious; the others are uninfected, and their etiology is often involved in great obscurity.

320. The vesicular are very different from the exanthematous inflammations. They are less unlike the bullous, from which, however, they are distinguished by the inferior size of the vesications that characterize them. The large bullæ of pemphigus cannot be confounded with the minute vesicles of eczema, of hydrargyria, and of sweating miliaria. Further, each of these diseases has its own peculiar and distinguishing characters.

The characters that distinguish vesicles from papulæ, tubercles, &c., have been already indicated (8), and by and by will be more particularly set forth.

The *incrustations*, the *furfuraceous scales*, and the *red marks* that follow some vesicular diseases, are distinguished with greater difficulty from alterations of an analogous kind, succeeding eruptions of a different nature. When speaking of each particular form of inflammation, I shall give the elements of the diagnosis in these difficult cases.

In the two-fold point of view of prognosis and treatment, vesicular inflammations present no common and generic characters for the guidance of the practitioner.

## HERPES.

Vocab. *Herpes, Dartre, Tetter.*

321. With Willan and Bateman I designate, under the name of *herpes*, a genus of cutaneous inflammations, not contagious in their nature, characterized by clusters of distinct vesicles inflamed at their bases, separated from each other by intervals of healthy skin, and drying off respectively and becoming covered with crusts in the course of one or two weeks. The different species of herpes, which resemble each other in the circular form generally assumed by their clusters of vesicles, differ in their seat (*herpes labialis*, *herpes præputialis*), in the arrangement of the several groups, which now appear scattered and far apart (*herpes phlyctenodes*), now disposed in the shape of a half girdle (*herpes zoster*), or in that of a ring (*herpes circinnatus*), and lastly, in the colour of the areola which surrounds them (*herpes iris*). (a)

(a) "Herpes" is a non-contagious affection of the skin, characterized by the eruption of clusters of globular vesicles upon inflamed patches of an irregular or rounded form, and of small extent. The eruption rarely presents any remarkable degree of severity; it is not usually accompanied by symptoms of constitutional disturbance; and it lasts for a brief period only; rarely longer than two or three weeks. Each vesicle runs a course of about ten days, and terminates either by absorption of its contents, by desiccation without rupture, or by rupture, and the formation of a thin, brownish scab, which speedily falls.

<sup>4</sup> *Der. eproué*, to creep.



Taken in the above acceptation, the word *herpes*, which has become classical, is not synonymous with the vague and indefinite name, *tetter* and *dartre*, by which the older English and French pathologists rendered it. It designates a class of affections, in the majority of instances, different from those which Lorry and some other pathological writers of the last and even of the present century, have grouped under the title *herpes*; it is now understood in a precise and rigorous sense which it does not possess in the nomenclature of the authors alluded to. (b)

#### HERPES ZOSTER OR ZONA.<sup>1</sup>

Vocab. *Zona, Herpes Zoster, Shingles, Ignis sacer, &c.*

322. *Herpes zoster, zona or shingles*,<sup>1</sup> is so denominated from the disease usually attacking one side of the body in the shape of a semi-circular belt or band formed by several clusters of agglomerated vesicles, which occasionally appear transformed into irregular bullæ by their conjunction, and the cure of which is commonly accomplished within two, three or four weeks.

323. *Symptoms.* The eruption of *herpes zoster* may be distinct, and characterized by scattered and not very numerous clusters of vesicles; more generally it is confluent, so that the vesicles of the various groups touch each other, or become mingled by their corresponding edges; in this case the epidermis may be detached over a considerable surface of the skin, as it is in extensive vesications from scalds or burns.

I have never met with *zona* as a chronic disease, and Willan makes no mention of this variety which is admitted by Lorry and Alibert, and of which Burserius quotes a case:—"Hanc speciem tamen diutinam non vidi, nisi semel in vetula quam stigmata pustularum sub omolata

"The varieties of *herpes* derive their designation either from the form and arrangement of the clusters, or from the locality of the affection. In reference to their general characters, these varieties admit of a natural division into two groups, a *phlyctenoid* group, and a *circinnate* group. The *phlyctenoid* group is characterized by the irregularity of form and distribution of the clusters of which it is composed; it is typified by the variety of *herpes phlyctenodes*, and embraces all the local forms. The *circinnate* group, on the other hand, is remarkable for the circular arrangement or form of its clusters; hence, the *herpes zoster* consists of irregular clusters disposed in a circular form around the trunk of the body; *herpes circinnatus* is characterized by the disposition of individual vesicles in the form of a circle; and *herpes iris* presents the same peculiarity in the form of concentric circles. In a tabular plan, the varieties may be thus arranged:—

1. <i>Phlyctenoid group.</i>	2. <i>Circinnate group.</i>
H. <i>phlyctenodes</i> ,	H. <i>zoster</i> ,
" <i>labialis</i> ,	" <i>circinnatus</i> ,
" <i>nasalis</i> ,	" <i>iris</i> ."
" <i>palpebralis</i> ,	
" <i>auricularis</i> ,	
" <i>præputialis</i> ,	
" <i>puddendalis</i> .	

(Wilson, *op. cit.* p. 157, Am. Edit.)

Dr. A. T. Thomson believes that there are only two distinct species of *herpes*, viz. *herpes phlyctenodes* and *herpes iris*. All the other forms, generally regarded as species, are, in the view of this experienced writer, mere varieties of *herpes phlyctenodes*, however they may differ in the figure of the clusters, or in the parts on which they appear.

(b) *Diagnosis.* *Herpes*, says Dr. A. T. Thomson, is distinguished from *pompholyx* by the vesicles appearing in groups or patches on an inflamed base; and from *erysipelas* by the vesicles not being preceded by redness and tumefaction; by their distinct yet clustered characters, and the state of the skin between the clusters. Neither *eczema* nor *impetigo* assumes the purely vesicular form, nor runs the same regular progress within a limited period; and both of them form their plates or semi-pellucid crusts, from under which a thin acrid fluid exhales, instead of the dry, hard scab which characterizes *herpes*.

<sup>1</sup> *Zona, cingulum, a girdle.*

*sinistra ad aliquot menses summo cruciatu atque ardore pertinaciter divexarunt.*"<sup>2</sup>

324. *Zona* may be developed on any region of the body; it is most frequently seen on the trunk, occasionally on the neck, face and scalp, on the scrotum and on the extremities. Like *erysipelas* it is occasionally preceded by a shivering fit, by headache, restlessness, insomnia, sickness of stomach, thirst and loss of appetite; the pulse is accelerated, the tongue is covered with a brownish or whitish fur, the patient is disinclined to exertion, &c. More frequently, however, the disease appears without any of these precursory symptoms. The evening before the eruption shows itself, the patient complains of prickling or smarting sensations, of burning heat or acute pain in the region which the *zona* is about to occupy.

In a previous edition of this work I remarked that of ten cases of *zona* which occurred, eight would be found on the right side of the body, without our being able to assign any cause for this anatomical disposition; and, since then, Messrs. Cazenave and Schedel have said, that nineteen in twenty of the cases of *zona* encountered, would be found occurring on the right side of the body. At present these statements do not seem to me based on fact: of fifty-three cases of *zona* which I have seen during the last few years, the eruption was developed on the right side in thirty-seven only. I may further add, that Reil tells us he has almost always seen *zona* invading the *left side*; and that out of twenty-five cases, Mehlis noticed sixteen on the *left*, and only nine on the *right side*. The discrepancy of these conclusions shows that accurate results will only be obtained when calculations have been made from data much more extensive than any that have yet been used.

1st. *Zona of the trunk* is the most common of all the varieties of this disease. The parietes of the abdomen are more frequently its seat than those of the thorax. The disease begins in some point of the mesial line, and proceeds outwardly and around the body till it approaches the plane of the vertebral column, forming in this way a sort of half girdle to the body. I have never seen *zona* form a complete belt; in such a case it would be almost impossible to distinguish the disease from *herpes phlyctenodes*. Pliny, Turner and Roussel have mentioned this disposition of *zona*; but they have neither given nor referred to any authentic instance of its occurrence. The case published by Mr. Montault, deserves to be quoted:<sup>3</sup> P \* \* \*, aged twenty-six years, complained of symptoms of gastric disturbance; on the seventh day he felt a violent pain in the right side, without cough or affection of his breathing; three days afterward there appeared on the right side, below and to the outside of the axilla, a number of erythematous patches, in the middle of which small whitish vesicles were before long evolved; from this point the eruption spread successively to the front of the chest, then to the back part of the body, and lastly to the left side.

*Zona of the trunk*, at its height, presents itself under the form of a semi-circular belt of variable breadth, formed by several rounded or oval groups of silvery gray or yellowish-coloured vesicles, occasionally mixed with irregular bullæ, surrounded by a red areola, and filled with a serous fluid either transparent or sanguinolent in its appearance. The eruption of these vesicles is preceded by irregular blotches of a rather vivid red colour, which sometimes show themselves at the two extremities of the belt, and are afterwards united by intermediate red patches, generally of an inferior size. These patches are soon crowned by numbers of small white silvery-looking and transparent vesicles of the form and size of seed pearls; in the course of three or four days they acquire the volume of a small lentil or large pea. The patches upon which the vesicles are evolved then become more florid, and the redness extends a few lines beyond the circumference of each particular group. At the end of five or six days the fluid contained in the vesicles assumes an opalescent appearance, becomes sero-purulent, and, when the inflammation runs high, is changed into true pus. Some of the vesicles burst spontaneously on the second, or from that to the fourth day, and pour out a little limpid and inodorous serum; the cuticle is detached, and the vascular rete of the corion being exposed, suppurates for a few days. Others, and indeed the greater number of the vesicles, dry up and become covered with small yel-

<sup>2</sup> Burserius. *Institut. med.*, vol. ii. p. 39.

<sup>3</sup> *Journ. hebdomadaire*, 2e série, t. iv. p. 259. *Zona* formant une ceinture autour du tronc.



lowish or brownish incrustations, usually lamellar in their texture, occasionally prominent, arranged in the form of a band, like the original eruption, and detached before long from the skin; others in fine shrivel up and disappear, the fluid they contain being reabsorbed.

The greater number of the vesicular groups of zona appear in succession, one after the other; whilst those that were first evolved are drying off and becoming purulent, new clusters arise in the intervals between them, and pursue the same course. When the disease affects the parietes of the thorax, the new groups occasionally spread across the shoulder so as to form a sort of T., by their junction with the others. A similar disposition of the vesicular groups is observed when the parietes of the abdomen are the seat of the disease, and the new crops of vesicles extend to the thigh of the corresponding side.

After the lapse of eight days at soonest, and of three weeks at latest, dating from the period of the attack, the whole of the incrustations of distinct zona are detached. The disease then leaves no traces of its existence, except *marks of a deep red colour*, which disappear by slow degrees, the peculiar oblique and belt-like disposition of which long reveals the nature of the eruption that has produced them.

The eruption does not terminate so speedily when the vesicles are confluent, and the skin that supports them is very much inflamed; in drying they are then covered by very adherent incrustations of a yellowish-brown hue, under which the skin occasionally becomes ulcerated and cicatrizes slowly.

Another and more disastrous consequence is occasionally observed: the part of the skin covered with vesicles on the posterior aspect of the trunk, is stricken with *gangrene* or a *softening of its texture*, whether from the effects of the inflammation, or in consequence of the continued pressure which this portion of the integument endures in the supine position of the body is uncertain. The eschars that then result have ragged and irregular edges, and do not always extend to the whole thickness of the skin, as I have many times ascertained by passing a probe over every part of the surface of the succeeding ulcer. The eschars are thrown off with greater or less celerity, according to their extent and thickness, and according to the age and vigour of the patient. If the skin be minutely examined after the fall of the sloughs, it appears as if a layer of the dermis had been removed with a shaving implement, leaving the part that remains white, and sown over with small red points; these seem owing to the penetration of the cellular prolongations and minute vessels that permeate the interstices of the tissue. When the eruption has been confluent, the skin that surrounds the excoriations remains red for a great while, and the cure is long looked for in vain. The cicatrices of these ulcerated spots are indelible; I have seen several which resembled the scars remaining after the cure of extensive burns.

The general symptoms that accompany the development of zona, the fever, thirst, headache, &c., commonly decline in severity, and occasionally cease entirely on the appearance of the eruption. Local pain, however, which is at times very intense in its character, and of the smarting kind, continues to the end of the disease, and occasions distressing insomnia. This pain is now and then complained of, even several weeks after all traces of inflammation have gone from the integuments affected. I have remarked it constituting the principal feature of a zona that aborted, or was imperfectly developed; this was in a patient who carried a single group of the vesicles of herpes zoster under the shoulder blade, and who complained at the same time of a very acute pain confined entirely to the left side, and extending like a belt from the spine to the sternum.

2d. Zona of the *neck* is more uncommon than zona of the trunk. I have seen this variety accompanied by very acute inflammation of the sub-mastoid lymphatic glands.

3d. When zona is developed on the *face*, the inflammation frequently extends to the mouth, one side only of which it likewise attacks. An old man, seventy years of age, was received on the 7th of January, 1827, into La Pitié, labouring under a chronic bronchitis; on the 13th of the same month, a vesicular eruption was thrown out on the left cheek, which, for three or four days previously, had been the seat of acute pain, shooting in the direction of the branches of

the portio dura. The skin of this side of the face presented a number of small red and slightly livid spots, which disappeared with pressure at first, but soon became changed into groups of vesicles similar to those of zona of the trunk of the body. Before long, the mucous membrane of the alveolar arch of the upper jaw, which was without teeth, and the inner surface of the left cheek were covered with vesicles, isolated or in clusters, and with several irregular bullæ of various dimensions, similar to those of the face. Vesicles of the same nature were also discovered on the left arch of the palate. On the last-mentioned part they were most numerous in the vicinity of the alveolar arch; they were all of irregular shapes, round, oval or elongated, and appeared to be surrounded by slight areolæ. This affection was preceded by prolonged shivering fits and constipation of the bowels. On the 14th, the fluid of the vesicles near the nose was partly changed into yellowish crusts; other vesicles that were just appearing were more prominent; of these, one small cluster was situated over the temple. The patient had complained, the evening before, of very violent pains in the left side of the face, and of a severe aching in the same side of the head. On the 26th, the vesicles of the temple, and of the external surface of the cheek, which were the first that appeared, were dried up; those of the interior of the mouth were yet distinguishable; the pain, still confined to the left side of the head and face, had recurred and continued through the whole of the night. On the 17th, the clusters of the face were succeeded by brown scabs, thin, where the vesicles were isolated, and distinct, thick, and analogous to those of impetigo, in those places where they had been confluent. Those of the inside of the mouth that had disappeared after an exfoliation of the epithelium, were replaced by small red spots.

4th. Zona attacks the *hairy scalp* still more rarely. A. B., forty-seven years of age, on the 27th of October, 1827, felt a severe smarting pain in the left eye and eyebrow, which soon spread to the forehead and cranium of the same side, without extending downwards to the face. Twelve hours after the commencement of the pain, vesicles, disposed in clusters, began to appear on the eyelids of the affected side, which were closed, and from between the edges of which a serous fluid kept distilling. Next day the left side of the forehead, and head generally, as far as the lambdoidal suture, was covered with small clusters of vesicles, similar to those of the eyelids, none of which passed the median line to trench upon the opposite side. On the 30th, these small clusters, scattered over the forehead and hairy scalp, presented the following appearances: the vesicles that had been formed most recently were not larger than the head of a pin, and contained a very transparent and limpid, yellow fluid; others were primarily of a larger size, or had become so by the fusion of several smaller ones; lastly, those that had been earliest evolved were completely dried up, and covered by a small black scab, set, as it were, within the substance of the skin around. All the remaining clusters dried up, as they do after their development on other parts of the body.

5th. Zona *perpendicular* or *parallel* to the axis of a *limb* is not of such rare occurrence as has been supposed; I have met with several cases of the kind; and others may be found recorded in periodical publications. When the disease attacks one of the lower limbs, the groups of vesicles are commonly scattered over the right or left lumbar region, the thigh, leg and foot.

I have, also, although rarely, seen zona developed on one side only of the skin of the *penis*, *scrotum*, *groin*, and verge of the *anus*.

7th. To conclude this enumeration, Marcus<sup>1</sup> speaks of a case of zona which appeared over the whole of one side of the body.

325. Zona seldom shows itself as a perfectly simple or uncomplicated disease. Psyraceous pustules occasionally occur in the midst of the vesicles that particularly distinguish it. The lymphatic glands of the axilla are often inflamed in zona of the thorax; this form of the disease I have seen complicated with pleurisy of the same side, a condition that was overlooked at first, the cough and local pain appearing to be sufficiently accounted for by the inflammation of the skin. I have, also, on many occasions, seen zona of the thoracic parietes, accompanied by bronchitis, of various degrees of intensity.

<sup>1</sup> Entwurf einer speciellen Therapie, B. ii. S. 213.



Among the internal affections that may be connected, or that may coincide with zona, there is, perhaps, none of more common occurrence than disorders of the stomach and bowels. Besides the precursory phenomena of zona being generally linked to symptoms of previous derangement in the alimentary organs, these often continue many days after the complete development of the eruption. I may add that other morbid conditions almost always accompany this vesicular inflammatory affection of the skin. One of these is a kind of neuralgia of the intercostal nerves which occurs in zona of the thoracic parietes; of the lumbar nerves, in that of the abdominal parietes; of the crural or the sciatic nerves, in that of the lower extremities, and so on. This neuralgic affection varies in intensity, and not only always precedes the development of the vesicular inflammation of the skin, but occasionally continues for several months after it is gone, and even requires particular medical treatment.

In this respect, as well as in the particular of their external form, there is a certain analogy between the vesicles of zona and those of the herpes labialis, occurring in intermittent fever. Another condition is a buffy state of the blood, which I have remarked in almost all the patients affected with zona, for whom I have had occasion to prescribe venesection.

326. *Alterations of structure.*—The anatomical structure of the vesicles and vesications of herpes zoster may be studied during life by opening them with the point of a pin or lancet. It will then be seen that besides serum the greater number of them contain a small piece of false membrane, which adheres very firmly to the vascular rete of the true skin below. The rete, of a vivid red colour, with small granulations formed by the papillæ scattered over its surface, occasionally presents minute points of a violet hue, especially under those vesicles that have been filled with bloody fluid. The quantity of serum effused is sometimes exceedingly small. In elderly persons I have observed the following disposition to obtain: the clusters well raised above the skin, distinct or confluent, and of the size of the largest vesicles seen in zona, were of a livid colour, flat on their surface, and so tough and firm that they did not give way under the pressure of the finger. By the eye it was impossible to judge whether they contained fluid or not; but a drop of limpid serum always escaped when the epidermis was pricked or raised by the point of a pin; and it was then evident that the violet tint and the hardness of the eruption were owing to a true elongation of the papillæ. In a case where the patient died, I had an opportunity of ascertaining that the vessels which penetrate the dermis were very much injected in the points corresponding with those on which the vesicles had been evolved.

The false membrane either does not exist, or is less apparent in those vesicles and vesications which have passed into suppuration. Those whose surface has become gangrenous, or that have been followed by excoriations, present different conditions, which I had an opportunity of examining at leisure, in the body of an elderly woman, affected with confluent zona of the upper part of the chest, who died towards the decline of the disease at the hôpital St. Antoine, of inflammation affecting the mucous membrane of the alimentary canal and air-passages. The excoriations were jagged, very irregular, and interspersed here and there with minute islets of skin, which appeared healthy, or simply red on its surface. The skin was destroyed to unequal depths on the excoriated points; in all it was softened, presenting in several a consistence no greater than currant jelly; the reticulated fibres of the dermis could not be distinctly made out; in sundry other places the skin, detached from the subjacent cellular membrane, was seen pierced with a few holes; in other places, again, it was completely destroyed through a considerable extent. The cellular substance only showed traces of inflammation here and there. The subcutaneous nerves, especially those which are supplied by the cervical plexus, examined with the greatest care, exhibited no appreciable alteration. The disease of the skin, though confluent, had not been accompanied by much pain.

327. *Causes.*—The causes of herpes zoster are little known. The disease is more frequent in summer and autumn, especially when the temperature is variable, than at other seasons. I saw a very great number of cases during the summer and autumn of 1827. Geoffroy, on the contrary, saw a great many patients labouring under the

disease in the month of March, 1778. Adults are more frequently attacked than children and elderly persons. I have known several persons suffer repeated returns of the disease in the space of seven or eight years, just as others are liable to renewed attacks of erysipelas, urticaria, &c. It has been observed as a hereditary disease;<sup>1</sup> it is neither contagious, nor has it been seen as an epidemic. Geoffroy,<sup>2</sup> indeed, says, that "many persons were attacked with zona in March, 1778," but he observes, at the same time, that the prevalent diseases were catarrhal affections of the head and chest. Very lately this cursory remark of Geoffroy, and several cases of the disease which had been accidentally collected within the same hospital, have been quoted as instances of the epidemic prevalence of zona. True epidemic diseases attack large masses of the population, not a few individuals.

328. *Diagnosis.*—The clusters of vesicles which characterize herpes phlyctenodes differ from those of zona in this, that they always appear on several regions of the body, such as the nape of the neck, the parotid regions, the ears, the sides of the chest, the axillæ, &c., and never assume the regular arrangement in a semi-cincture like zona. Several other particular characters further distinguish herpes zoster or zona, from herpes phlyctenodes, and the other varieties of this vesicular disease. The vesicles of almost all of these are smaller in size, and are never followed by the deep excoriations, nor the eschars occasionally observed in zona. With erysipelas, zona has only the functional derangement of the digestive organs, which so often accompanies both, in common; in the external and general characters of erysipelas, none of the local and particular symptoms of zona are to be discovered. Notwithstanding this fact, herpes zoster has actually been described by some authors as a species of erysipelas, probably because the surface affected by the latter is occasionally covered with a few phlyctenæ. But it seems impossible to confound the clustered vesicles of zona with the irregular and often very large bullæ observed in erysipelas. It is, indeed, true that the vesicles of zona, when they are confluent, occasionally change into irregular vesications; but then they are surrounded by areolæ that extend in proportion as the disease advances, and the vesicles and bullæ approach the period when they dry up and become converted into scabs or incrustations. Moreover, zona constantly appears in a form that is every way different from erysipelas. In the latter, the swelling of the skin, always much more remarkable than in zona, is accompanied by a tumid or puffy state of the subcutaneous cellular membrane. Erysipelas ends in a general desquamation of the surfaces it had affected, whilst the fall of the incrustations of zona is limited to the points that had been immediately occupied by its vesications and groups of vesicles. The form assumed by zona suffices to distinguish it from pemphigus. Zona only attacks a stripe or band of the skin; pemphigus is characterized by a single large bulla, or by numerous bullæ scattered over different regions of the body, which never extend in the form of a girdle. In zona, the accompanying redness spreads in a large areola around each cluster more and more widely as it advances toward suppuration, whilst in pemphigus, very slight and narrow areolæ are alone observed; occasionally, indeed, no areola whatever is visible; the redness of the skin in pemphigus, too, when it does occur, diminishes as the bullæ extend or dry up.

329. *Prognosis.*—Zona is never a serious disease among children or adults; in the aged it may be succeeded by sloughing and gangrenous ulceration, and these are accidents that always prove formidable. Langius<sup>3</sup> cites two cases in which this disease was fatal. Platner and Hoffmann have unquestionably alluded to cases of the same character when they speak of zona as a dangerous and malignant malady. Lorry, Burserius, Geoffroy and others have not noticed any cases of this description, which must, therefore, generally speaking, be held as exceptions; these authors do not see any thing alarming in zona. Of several hundred cases I have treated myself, I do not remember more than five or six that proved fatal, and the subjects of these were constantly aged persons. If Pliny, the naturalist, says that this disease becomes mortal when it forms a belt completely

<sup>1</sup> Lond. Med. Gazette, vol. ii. p. 632.

<sup>2</sup> Mem. de la Société roy. de Médecine, t. 2, 1778.

<sup>3</sup> Epist. Med., p. 110.



round the body, the opposite statements of Turner, and the observations of M. Montault, prove the assertion to be incorrect.

Herpes zoster sometimes forms the *crisis* of more serious affections. The interesting case related by W. Gulbrand, *de vertigne periodica per zonam solutâ* is well known. An instance of pleurisy consequent on the healing up of an ulcer, relieved by the eruption of herpes zoster, has been recorded.<sup>1</sup> In this case, however, the symptoms and characteristics of pleurisy are not rigorously set forth. On the other hand, the progress of zona may be modified by existing or intervening diseases. Two females, placed under the care of Dr. Recamier, were attacked with sciatic neuralgia: groups of vesicles, resembling those of herpes zoster, appeared here and there upon the thighs and legs of the affected side; but instead of increasing in size, of attaining maturity, and, in a word, running the usual course of zona, they became flaccid almost immediately after being thrown out, and soon dried up, so that after the fourth or fifth day no farther traces of the eruption were visible.<sup>2</sup>

330. *Treatment*.—When zona is preceded by severe pain, heat of skin, and acceleration of pulse, a bleeding from the arm, or the application of a number of leeches to the verge of the anus, or to the epigastrium, is often a useful measure; these symptoms, however, are commonly soon abated by rest, spare diet, and cooling drinks. The primary symptoms may either decline immediately, or continue with nearly the same intensity during several days, and compel us again to have recourse to the lancet, especially when the blood at first abstracted has been buffy. I have by this means treated successfully the insomnia and pain attending zona with fever, in a considerable number of cases. When the patients have refused to be bled, I have ordered the application of a line of leeches along the most painful parts, and an anodyne draught to be taken at night. The speedy relief that is so speedily obtained in this way, is always looked for several days before it arrives, when the treatment is limited to the purely expectant method. In general, blood-letting, which is prejudicial in the cases of elderly persons, and unnecessary in those of persons in the vigour of life, when the eruption is inconsiderable in extent, and not very violent in character, is very beneficial in cases of zona that are accompanied by violent pain and high fever, when the age and the constitution of patients warrant us in having recourse to the measure.

I have frequently seen the tartrate of antimony prescribed in the beginning of shingles, and I was myself for several years in the habit of employing this medicine, when the disease was accompanied by symptoms of gastric derangement; but I am now satisfied that the complaint went on, unmodified for the better, even to the time of the complete desiccation of the vesicles; the purely expectant method was even more fertile in results. (a)

Emollient topical applications hinder the vesicles from drying up, and seem rather to induce than to prevent excoriations. Opiate liniments have the same ill effects, but they allay pain, and induce sleep, when they are applied to the ruptured vesicles, or excoriated surfaces. They never cause the recession of the disease, which several writers have apprehended.

When the disease is confluent, and the cuticle is raised or removed from a great extent of surface, or, otherwise, when patients do not consent to keep their beds, it is proper, if the vesicles be not touched with any escharotic substance, to protect them from the friction of the clothes, by powdering them with starch, or covering them with tissue-paper, impregnated with oil and laudanum, or a piece of soft lint spread with cerate, retained in its place by a light bandage.

Patients, and especially such as are advanced in life, ought to be careful to lie habitually on the unaffected side, a precaution without which they will run the risk of inducing gangrene in one or several

of the clusters. Should any of these small eschars chance to be formed, they are to be covered with a piece of sticking-plaster until they are thrown off, when the ulcerated or perforated skin is to be dressed with camphorated ointment, and a soft compress of dry lint. If the sloughs are large and penetrate deeply, they are still to be dressed in the same way, with the greatest care and regularity. A slight application of the nitrate of silver, at intervals, often hastens the process of cicatrization. Internally wine, or wine and water, should be allowed; wine and the decoction of bark are the diet drinks of the aged.

Turner recommended the vesicles of shingles to be denuded of their cuticle; M. Serres proposes to cauterize them, with a view to shorten the period of the eruption, and to lessen its attendant pain. I have tried the plan; the first five cases were not favourable in their results; all the patients complained that the process was very painful, and it did not seem sensibly to shorten the disease. I have, however, varied the mode of procedure of late, and I find now, 1st, that if, after having opened the vesicles, or removed the cuticle by excision, their bottoms be very lightly touched with the nitrate of silver, in the same way as is often done in aphthæ, the duration of shingles is abridged, and that, on the contrary, it is prolonged, if the escharotic be too freely and carelessly applied; 2d, that the vesicles, when properly cauterized, are more rarely followed by excoriations, or by eschars, than those that are left to themselves, especially in elderly persons, and when they are situated upon the posterior parts of the body; 3d, that this system, which may be omitted in slight and distinct cases of shingles, ought to be put in force whenever there seems reason to apprehend excoriations or eschars in any of the groups on the body, face, &c.; 4th, that in touching slightly the red patches which precede the eruption of the vesicles, and especially those which appear subsequently to the first crop of clusters, their further development is almost always arrested, but that the acute pain which accompanies them is not modified or abated.

As to the *subcutaneous pains*, which in various degrees of severity occasionally continue several months after the disappearance of shingles from the parts it had invaded, they are commonly relieved by the exhibition internally of hyoscyamus, belladonna, and powdered stramonium seeds; (a) by the use of local vapour baths, or of a succession of blisters along the course of the affected nerves. An old woman who suffered much from a neuralgic affection of this kind, was speedily cured by taking a drachm of the subcarbonate of iron three times a day. I have, however, met with many of these neuralgic affections which neither yielded to any of the remedies mentioned, nor to many more besides that were tried. I cannot better compare these obstinate pains which supervene after shingles, than to certain cases of tic-douloureux whose resistance to therapeutical agents of every kind is often truly deplorable. (b)

(a) Or, still better, of the extract of stramonium. More than mere analogy will direct the use of colchicum in these cases; also decoction of dulcamara.

(b) The following observations by Mr. Plumbe (*op. cit.* p. 214) are worthy of notice in the present connection. "Like the prickly heat, the eruption of herpes can never be checked [repelled?] by any medicine or medicinal application; and those, therefore, which relieve the sufferings of the patient, ought not to be neglected. Solutions of ceruss. acet., or the liq. plumb. acet. dil., with the addition of alcohol, may be applied with advantage by means of wetted linen; they lessen the pains in question, *but never check the eruption in its course*. The vesicles ought not to be cut or rudely broken, such a proceeding generally rendering the separation of the scab considerably more tedious than it would otherwise be; but if care be taken to puncture each individual vesicle early, so as to allow of the free escape of the fluid, the pain is much diminished, and the irritation sooner subsides." Dr. Mackintosh says that, in herpes zoster, leeches on the inflamed part, if early applied, will arrest the further progress of the disease. Plumbe has found blisters near the inflamed spot exert a similar effect.

<sup>1</sup> Pleurisy, with an eruption of herpes apparently critical. (London Med. Gaz., v. 1, p. 707.)

<sup>2</sup> Revue Médic., t. xxv. p. 435.



*Historical Notices and particular Cases of the Disease.*

331. Celsus signalizes the principal characters of herpes zoster in his description of the first species of *ignis sacer*, "Exasperatumque per pustulas continuas, quarum nulla alterâ major est, sed plurimæ perexiguæ. In his semper ferè pus, et sæpè rubor cum calore est, serpitque id nonnunquam sanescentre eo quod primum vitiatum est, nonnunquam etiam exulcerato, ubi ruptis pustulis ulcus continuatur, humorque exit qui esse inter saniem et pus videri potest. Fit maximè in pectore aut lateribus, etc."<sup>1</sup> Scribonius Largus considers it as a species of herpes, and distinguishes it from the *ignis sacer* "Zona, quam Græci *επειτα* dicunt."<sup>2</sup> Pliny entitles the disease *zoster*.<sup>3</sup> Several other names have been given to it in modern times, such as *zona ignea*, *zona serpiginosa* (Schwarz), *herpes zoster* (Willan), *erysipelas zoster* (Sauvages), *erysipelas phlyctenodes* (Cullen), *dartre phlyctenoïde en zone* (Alibert), *cingulam*, *shingles*, &c.

Schenckius<sup>4</sup> relates a case of *zona of the loins and thigh* that was cured by a bleeding from the foot. Tulpus<sup>5</sup> has given a good description of *zona of the trunk*. Turner<sup>6</sup> has published observations on shingles of the neck, of the trunk, and of the limbs. In the first edition of this work I gave an account of the disease affecting *the face and mouth*. Bergius,<sup>7</sup> Jos. Frank,<sup>8</sup> and M. Cazenave,<sup>9</sup> have each published notices of the disease affecting *the head and hairy scalp*. Hoffmann tells us that he had seen the eruption of *zona* preceded by anxiety and *delirium*.<sup>10</sup> Messrs. Serres,<sup>11</sup> Bedor,<sup>12</sup> Ern. Geoffroy,<sup>13</sup> Velpeau,<sup>14</sup> &c., have written in favour of the cauterization of the vesicles of *zona*. Pinel<sup>15</sup> and M. Louis<sup>16</sup> have given us histories of cases in which the pain continued for several years after the disappearance of the eruption; M. Molinié<sup>17</sup> and M. Lesénécal,<sup>18</sup> have inserted in their inaugural dissertations, the histories of many cases of *zona of the trunk and extremities*. In the two following cases the disease appeared in quarters where it is very rarely seen.

CASE XXXVII. *Herpes zoster of the left side of the face, and of the inside of the mouth.* M. M. \* \* \*, twenty-seven years of age, and of regular habits, entered the Hôtel Dieu on the 29th of March, 1826. On Thursday the 23d, without known cause, this patient felt slight shooting pains in the left ear, which became more severe on the 24th, and extended to the neck. Whilst smoking, as usual, on the 25th, he felt severe prickling pains in the tongue, which one of his friends examined, and told him it was *white*. In the night, between Saturday and Sunday, a number of small blisters were developed on the left cheek close to the ear, which on Monday and Tuesday became more numerous and spread over the chin. On Wednesday the patient went out and got chilled; on returning home he continued to shiver for three hours. This cold fit was succeeded by a burning heat that lasted the whole night. The patient did nothing for himself until Sunday, when he had a little olive oil dropped into the ear that was painful, and washed his mouth repeatedly with vinegar and water. Wednesday, 29th of March, the day of the patient's admission into the hospital, the disease was in the following state:

The left cheek is swelled, hard and hot. From the ear to the chin, over a surface about three fingers' breadth in extent there is a band of bullæ and rounded vesicles, of different sizes. The vesicles are from half a line to a line in diameter, and are separately disseminated, or gathered together in clusters. The bullæ are much more voluminous than the vesicles, but much fewer in number; they are from four to

six lines in diameter. Many vesicles appear about their circumference. Several of the bullæ and vesicles are transparent, and contain a limpid fluid; others are of a dull white colour, and are filled with what appears to be purulent matter. Both bullæ and vesicles are mingled with many irregular yellowish and soft incrustations.

There is a copious secretion of pus from the meatus auditorius externus. Neither redness nor ulceration are apparent in this part; but the concha is covered with several small vesicles.

The left half of the tongue is swelled, thick, red, and covered with soft whitish plates of an irregular shape. Some of them are of the size of the vesicles, others nearly as large as the bullæ that exist on the skin. These plates appear to be about as thick as a sheet of paper. Several of them formed of the epithelium thickened, are almost detached. White patches or spots of a similar kind are observed on the inferior surface of the tongue, on the inner side of the left cheek and left half of the gums and lower lip; but none are to be seen on the palate, nor on the upper lip. Lastly, the affection appears to be limited in the most precise manner by the median line: the right half of the mouth and particularly the right half of the tongue, have their natural colour and appearance.

The saliva, which is abundantly secreted, is ropy; the breath is offensive, but has nothing of the mercurial odour. The patient neither complains of heat nor unpleasant taste in the mouth. The pain of the ear is much less to-day; he does not complain of headache, has no cough, little inclination for food, less thirst; the bowels have been locked up during the last three days; the abdomen is not tender, even on pressure; the urine is natural; the pulse strong and full, not febrile in its character. (*Venes. ad 3xii; veal broth for drink; lavement, gargle of barley water with honey and roses; spoon diet.*) March 30th.—The vesicles and bullæ which were plump last evening, are changed into yellow scabs. Five new vesicles, as large as pin's heads, have been formed during the night. Several of the white plates that adhered to the tongue are detached. The pulse is quicker than it was yesterday, but not so full. (*Veal broth, gargle, spoon diet.*) April 5th.—There is now no trace of the white specks in the mouth. The left margin of the tongue presents a longitudinal furrow, bounded above and below by a prominent red line. The upper surface of the left side of the tongue is still red and uneven. When the patient thrusts his tongue out of the mouth, the point deviates to the right side. The secretion of saliva is much less copious than it has hitherto been; the left cheek is less tense; it is now neither injected nor hot. The scabs that have followed the bullæ and vesicles of the chin bear a slight resemblance to those of *impetigo figurata*. Three scabs are observed, differing from all the others, near the concha of the ear; these are brown, dry, like a small portion of horn, and are a little under the level of the skin. To these a poultice was applied. April 28th.—All the scabs have been thrown off. The skin of the chin, in several places, is callous, indurated, and covered with tubercles like those that succeed *mentagra*. From this time the patient continued quite well, and soon left the house.

CASE XXXVIII. *Herpes zoster of the left side of the face, neck, meatus auditorius externus, and part of the hairy scalp.*—B. Lambert, seventeen years of age, presented himself among the out-patients of the hôpital St. Antoine, on the 24th of August; on the 19th, this patient had complained of heaviness of head, and heat in the regions that were now covered by an eruption of herpes zoster, which, in clusters of various sizes, extended upwards from above the clavicle on the left side to behind the ear, to the cheek, and parts covered by the beard, and downwards over the fore and outer parts of the chest.

The clusters are everywhere of a bright red colour, which disappears under the pressure of the finger, and re-appears immediately on its removal. On several of them, less advanced than the rest, small vesicles are seen situated upon and projecting in a slight degree from the surface of a red patch of skin underneath. On the right side, behind the ear, and upon the scalp of the same side, these vesicles are more apparent than those of the groups scattered amidst the beard and over the chin. The patient assures us that these last have appeared since yesterday. One cluster is conspicuous in front of the meatus auditorius at the root of the hair; another is seen within the meatus itself.

<sup>1</sup> Celsus. De re medicâ, lib. v. cap. 28, § 4.

<sup>2</sup> Scribonius largus. De composit. medicam., cap. 99, 100.

<sup>3</sup> Nat. hist., lib. xxvi. cap. 11.

<sup>4</sup> Obs. med., in-fol., lib. v. p. 639.

<sup>5</sup> Obs. med., lib. iii. cap. 44 (Excedens præcordiorum herpes).

<sup>6</sup> On diseases of the skin, chap. 5, p. 80.

<sup>7</sup> Eph. nat. cur. dec. ii., an. 3, obs. 171.

<sup>8</sup> Act. clinic., vol. iii. p. 22.

<sup>9</sup> Journ. hebdom., t. i. p. 317.

<sup>10</sup> Bergius. Instit. med. De igni sacro, t. ii. p. 34. (Hoffmanni Observatio.)

<sup>11</sup> Journ. des hôpitaux, in-fol., pp. 41, 62, 89.

<sup>12</sup> Journ. hebdom., 2e série, t. i. p. 271.

<sup>13</sup> Revue méd., t. x. p. 50.

<sup>14</sup> Nouvelle biblioth. iné., t. iv. p. 435.

<sup>15</sup> Nosog. philosoph. Art. zona.

<sup>16</sup> Journ. hebdom., t. vi. p. 361.

<sup>17</sup> Molinié. Diss. sur le zona, in-8. Paris, 1803.

<sup>18</sup> Lesénécal. Diss. sur le zona, in-4. Paris, 1814.



The parts covered by the eruption are not particularly painful; the state of the general health is good, and the patient complains of no want of appetite.

The patient was not restricted in any way; at the end of the second week a few livid spots of the same shape as the previous clusters of vesicles were all that told of the existence of this eruption.

## HERPES PHLYCTENODES.

Vocab. *Herpes miliaris*, *Herpes phlyctenodes*.

332. Herpes phlyctenodes is characterized by clusters of globular and transparent vesicles, as large as millet-seeds, or the smallest peas, which appear in variable numbers upon red patches, usually of a circular form, and disseminated over different regions of the body.

333. *Symptoms*.—This species of herpes, which is excellently described and represented by Bateman, is occasionally developed on the forehead, the cheeks, and the neck exclusively; more frequently it appears first on the extremities, whence it spreads to various other quarters. Willan and Bateman conceive that herpes phlyctenodes is always an acute disease. I have seen it assume a chronic form, one crop of vesicles being evolved after another.

A sensation of tingling, of itchiness or painful smarting and pungent heat in the parts where the eruption is about to appear, is followed by the formation of minute and almost imperceptible red points clustered together, so as speedily to compose an irregular coloured patch, the breadth of which varies between that of a half-crown piece and that of the palm of the hand. Some hours afterwards, or next day at farthest, a number of hard, shining and globular vesicles, varying in size from that of a millet-seed to that of a small pearl or pea, arise on the inflamed patches. These are filled with serum, which is usually colourless, or of a pale citrine tint, but occasionally presents a brownish hue in the aged. The vesicles themselves occur in *irregular clusters* of different magnitudes, but consisting in general of from a dozen to about fifty vesicles. To these primary clusters, which are often not more than one or two in number, several similar groups succeed. The integuments preserve their natural appearance between the different clusters, but seldom between the several vesicles composing the particular groups. The tingling and smarting sensations are increased by augmentations in the external temperature and by the warmth of the bed during the night. The size of the vesicles in general increases with rapidity; some of them even acquire rather considerable dimensions, and appear formed by the confluence of several into one. Twenty-four or thirty-six hours scarcely elapse after the appearance of the inflamed patches, before the fluid in the vesicles becomes turbid. The smaller assume a milky hue; the larger turn brown and are filled with sanguinolent serum. The whole decline, or are broken, from the sixth to the tenth day, during which interval new clusters continue to arise. The fluid of the very minute vesicles is occasionally reabsorbed, and many clusters seem to miscarry; the fluid they contained is rapidly turned into yellowish or blackish scabs, which are usually loosened from the tenth to the twelfth day. The parts of the skin that have been affected retain for some time a red or livid colour; and a painful sensation of prickling or smarting, very similar to that which follows shingles, occasionally continues for some time after the eruption has disappeared. Several weeks after the cure of the vesicles, small circular yellow stains still show the points they have occupied.

Between the irregular clusters of the herpes phlyctenodes a few single vesicles, and occasionally a few pustules, make their appearance. In some rare cases the clusters of herpes phlyctenodes have a regular circular form, and the areas of the patches are covered by distinct, not confluent vesicles. This variety, which in England is known under the name of the *nirles*, is always attended with violent pain, and a notable derangement of the general health.

The appearance of phlyctenoid herpes is occasionally connected with some slight disorder of the digestive organs, proclaimed by tardy digestion of the food, by thirst, heat and oppression of stomach, tumid state of the abdomen, &c. In some cases this internal affection even attracts our attention more than the outward malady. Seve-

ral other symptoms precursory to the eruption, are also frequently observed: one patient complained for two days of acute pains similar to those of rheumatism or sciatica, and anon the disease made its appearance upon the two lower extremities. It may also occur in individuals labouring under other diseases: in an individual affected with a pulmonary catarrh, I have seen herpes phlyctenodes evolved on the face, the front parts of the thorax, under the axillæ, on the extremities and on the scrotum; in this case the vesicles were preceded by red patches several inches in diameter, slightly raised above the level of the skin, and were so minute that they could scarcely be distinguished by the naked eye. Among the clusters on the scrotum there were several that might very readily have been mistaken for something else, without attention to the nature of the neighbouring groups. The cutaneous eruption in this case had no influence either salutary or noxious on the progress of the bronchial affection.

The duration of herpes phlyctenodes varies considerably; usually lasting three weeks, it is occasionally much more protracted; the spots that follow the vesicles often continue visible for several months.

334. *Causes*.—Like those of shingles, the causes of herpes phlyctenodes are exceedingly obscure. The disease occurs more frequently in persons of mature age than among children and the aged; it is often observed to follow night watching, moral affliction, and other acts that powerfully excite or modify the nervous system. (a)

335. *Diagnosis*.—Herpes phlyctenodes cannot be confounded with pemphigus: the former being characterized by an eruption of vesicles, the latter by one of bullæ. Several circumstances, however, may conduce to obscure the distinguishing features of these two diseases.

In the first place we see that M. Alibert formerly described pemphigus under the name of *herpes phlyctenodes* or *dartre phlycténoïde*; but this is not the first occasion on which two different diseases have been called by the same name: to avoid error it is in this instance enough to be informed of its existence. On the other hand, the practice of employing the words *bullæ* and *phlyctena* as synonymous terms, ought to have led Bateman to avoid the use of the appellative *phlyctenodes*, which is calculated to continue the confusion of names. The old denomination of *miliaris*—herpes miliaris, or any other that bore reference to the size or disposition of the vesicles would certainly have been preferable.

Herpes phlyctenodes approaches pemphigus in its characters when the bullæ are of small size, as they are often observed to be in the variety designated *pruriginosus*; the bullæ of pemphigus, however, are seldom seen in groups. Farther, the bullæ in pemphigus *pruriginosus* are small, round and mixed with papulæ, whilst in herpes phlyctenodes, when the vesicles are large, they are angular or irregular in shape. When herpes phlyctenodes is complicated with accidentally occurring bullæ, it may be confounded with pemphigus conjoined to an herpetic affection; these two conditions form a sort of transition reciprocally from the one disease to the other. The bullæ of acute pemphigus differ too widely from the vesiculæ of herpes phlyctenodes to make the diagnosis in this case either uncertain or difficult.

In eczema the vesicles are rarely seen in clusters; I have, however, met with a few instances of this arrangement. The vesicles of eczema are always smaller and less prominent than those of herpes.

336. *Prognosis and treatment*.—Herpes phlyctenodes, the dangers of which have been strangely exaggerated by some pathologists, seldom appears on a great many regions of the skin at once. When it occurs, as it almost always does, with the acute type, it gets well of itself in the course of one, two or three weeks, in individuals of sound constitution. Its period may be shortened by cauterizing the vesicles. I always find it yields readily to cold or tepid bathing, to cool emollient and soothing lotions, to diluents and the antiphlogistic regimen, without having recourse to blood-letting. Nevertheless, in herpes phlyctenodes, as in shingles, when the patients are strong and the eruption is abundant, and so painful as to cause sleepless nights, a bleeding from the arm never fails of giving great relief. The blood abstracted under these circumstances is often found to be buffy.

Any increase of temperature adds to the pain and uneasiness. Cold

(a) Plumbe points out the fact, which must have been noticed by other practitioners, of the frequent occurrence of this disease in children during the period of dentition.



lotions and cold poultices applied to those clusters that are very much inflamed, occasionally give ease; but as they prevent the scabbing over of the vesicles, they are in general rather injurious than beneficial.

When the disease appears in children, Underwood recommends the juice of the *Pastinaca sativa*, in doses of from one to five table-spoonfuls, mixed with a small quantity of milk.

In brief, when the disease is acute, but inconsiderable in extent, it may be left to itself, for it gets well spontaneously in no long space of time; this at least may always be done when children are affected, as the application of escharotics alarms them greatly; but when adults are attacked the vesicles should be slightly touched with lunar caustic, and, if need be, a small quantity of blood abstracted. When the disease assumes the chronic type, and the vesicles appear in successive crops, a case which very rarely happens, experience shows that the use of purgative medicines contributes essentially to its cure, as it does to that of those eruptions generally, the development of which appears occasionally to depend on a buffy state of the blood. The violent pains that so frequently follow shingles, occur more rarely after herpes phlyctenodes, which also leaves cicatrices of the parts it has invaded less commonly than the herpes zoster.

#### *Historical Notices and particular Cases of the Disease.*

337. Bateman believes that it was this variety of herpes that Galen meant to designate, when he spoke of the *εγερς κηρυχέας* (*herpes miliaris*). The passages quoted by Foesius,<sup>1</sup> and all those I have consulted with the assistance of the *novus Index in omnia quæ extant Galeni opera, fol.*, Basil. 1562, appear to me too vague to be capable of any rigorous and precise interpretation. I even perceive as many of the characters of eczema as of those proper to herpes, in this author's account of the Roman matron who laboured under a *herpes of the ankle*.<sup>2</sup> Aëtius<sup>3</sup> repeats Galen. And the same vagueness of description, and the same uncertainty pervade the whole of the notices of herpes miliaris we meet with until the time of Turner,<sup>4</sup> who specifies the characters of the disease with precision. Willan and Bateman<sup>5</sup> have described it still better than Turner, and have figured it fairly. Russell<sup>6</sup> speaks of it under the very objectionable title of *herpes excedens*. Jos. Frank's<sup>7</sup> account of the disease is not marked by exactness, and is even obscured by false contrasts with other affections. Underwood<sup>8</sup> has spoken of its occurrence among children, and Alibert has described this variety of herpes under the name of *olophlyctide miliare*.

CASE XXXIX. *Herpes phlyctenodes of the face, preceded by pleurisy and erysipelas.* Rogers, admitted into La Pitié, on the 14th of January, 1826, labouring under pleurisy, which was arrested by the general and local abstraction of blood. A few days afterwards an erysipelatous inflammation attacked the face, for which sixteen leeches the one day and eight the next, were applied behind the ears and to the temples with the effect of immediately cutting short the disease. On the 12th of February an eruption of herpes phlyctenodes appeared on the skin of the face which was then losing its cuticle. Several clusters of vesicles were situated over the malar bone and masseter muscle of the left cheek, and on the frontal, temporal and nasal regions of the right side. The greater number of these vesicles were about a line in diameter, others were somewhat larger. They were unsurrounded by any red border, contained a whitish and semi-transparent serum, and were only distinguished at first sight from the rest of the skin by their white and silvery aspect. In the intervals between them the skin retained the pallid hue it had assumed ever since recovering from the erysipelas. The vesicles were developed without heat or pain of the skin. The tongue appeared a little red, yet the digestive functions were regular and the sleep was natural. On the 18th the vesicles had dried up and were succeeded by small scabs, in general of a thin texture and brown colour, though some of them were thicker

and of a yellow hue. An inflammatory affection of the gastric and bronchial mucous membrane succeeded this slight disease of the skin, and the patient continued for some time longer in the hospital.

CASE XL. *Herpes phlyctenodes of the body, face and lower extremities, preceded by catarrhus vesicæ, and followed by bronchitis.* Pierre Fort, aged 71, of good constitution, but with a yellow and bilious look, consulted me on the 19th of March, 1826. Three weeks previously he had had symptoms of retention of urine, which on the 14th, in consequence of some freedom in diet, became complete; fever set in and continued for eighteen hours, at the end of which time, and after drinking copiously of linseed tea, &c., he began to pass his urine without the use of the catheter. Since then P. F. makes water six or seven times a day. He complains of no pain in the hypogastric region, and shows none of the symptoms of chronic inflammation of the bladder. The object of his visit was to seek advice for another disease, herpes phlyctenodes complicated with bronchitis, which had first appeared on the 17th of March, during the violent sweating fit that terminated the febrile paroxysm brought on by the retention of urine. During the night between the 16th and 17th, several clusters of vesicles were observed on the front and lateral parts of the chest; a few vesicles were also evolved on the lips, alæ nasi and ears, during the course of the 17th. Next day he complained of tinglings in the buttocks, on which he could not rest without pain: the eruption had in fact extended to these parts.

19th. Many distinct and unbroken vesicles were seen on different parts of the face; several clusters in different stages were remarked on the chest, some of them transparent, others turbid, and filled with sero-purulent fluid; on the buttocks there were two distinct clusters, of rather larger dimensions than they possessed in other situations. These vesicles were everywhere of a much larger size than those of eczema; their base was very slightly inflamed, but still surrounded by a narrow red border. Besides the disease of the skin, I detected an affection of the bronchi. The inclination for food was not great; the sleep was interrupted by fits of coughing (*pectoral tisan, linctus, vegetable diet*). 24th.—The great number of the vesicles were now dried up; such as were not so far advanced, had a small yellow point in their centre; and others had been destroyed by rubbing. 26th.—The vesicles that had escaped destruction were transformed into black scabs, of an oval shape, and of the size of small grains of rice. 28th.—Small red spots indicated the points from which the scabs had been detached. The bronchial affection continued for some time longer than the disease of the skin.

#### HERPES CIRCINNATUS.

*Vocab. Herpes Circinnatus, Ringworm.*

338. *Herpes circinnatus*, or *vesicular ringworm*, is characterized by an eruption of small, globular, and very closely crowded vesicles, arranged in the form of rings, or completely circular bands. The portions of skin included within these are usually healthy, and the edges, more particularly, or the circlets, are seen to be studded with vesicles, and of a red colour of greater or less intensity. The duration of this eruption extends necessarily to no longer a period than a week or two, but it may be greatly protracted beyond this interval when the eruption of the vesicular rings is successive. It appears on the neck, cheeks, arms, shoulders, and other places, under the form of red and inflamed oval or circular spots, from half an inch to two inches in diameter, the evolution and continuance of which are accompanied by a very troublesome sensation of itchiness and smarting. The redness is less vivid in the centre than towards the circumference of the smaller spots. It is entirely wanting in the areas of the larger patches, within which the skin preserves its natural appearance. Small globular vesicles very closely set, whose bases are slightly inflamed, and which contain a transparent fluid, are rapidly developed around the circumference of the patches, at the same time that their areas become temporarily of a deeper red colour. From the fourth to the sixth day of the eruption the redness declines; the vesicles of the circumference become turbid, and then either burst, or are covered by small brownish scabs of extreme tenuity, which in their turn are

<sup>1</sup> *Œconomia Hippocratis*, art. *Εγερς*.

<sup>2</sup> Galeni meth. med. in fol. Basil., 1561, t. iii. p. 184.

<sup>3</sup> Aëtius. Tetrab. serm. 2, cap. lx. p. 73.

<sup>4</sup> A treatise of diseases incident to the skin, in 8vo. London, 1731, fifth ed., p. 74.

<sup>5</sup> Delineations of cutaneous diseases, pl. xlix.

<sup>6</sup> De herpetibus, in 8vo., p. 29.

<sup>7</sup> Præcox univ. medic. præcepta. Art. herpes miliaris.

<sup>8</sup> On the diseases of children. Eighth edit., in 8vo. p. 182.



detached between the tenth and fifteenth day; at the same time a slight desquamation takes place from the centres of the spots when the redness has spread to them. Occasionally the fluid of the vesicles is reabsorbed, in which case they sink down, and are followed by an almost imperceptible exfoliation of the epidermis. The circlets of small diameter, covered with extremely minute vesicles are those especially that terminate in the manner just indicated; those of a larger size, and crowned with vesicles of greater dimensions, scab and scale off like herpetic eruptions in general.

Herpes *circinnatus* is never accompanied by any general functional derangement,—always understood that it is not complicated with another disease. It may be protracted for several weeks, when the patches and vesicles that characterize it are evolved in succession on different parts of the body. I have seen some of these ring-like vesicular clusters of the skin, surmounted by the bullæ of pemphigus.

Several of the children in the same school, or in the same family, are occasionally attacked with herpes *circinnatus* at one time; this circumstance has led some writers to conclude that the disease was contagious; the simultaneousness of evolution, however, may depend on other causes, such, for instance, as the impression of cold.

English authors having treated of the herpes *circinnatus* under the name of *ring-worm*, a title by which a variety of favus or scall, (*porrigo scutulata*,) undoubtedly a contagious disease, has also been designated, this confusion in the nomenclature has probably tended to keep alive the opinion that herpes *circinnatus* could be communicated from one individual to another. Herpes *circinnatus* cannot be, and never is, propagated by inoculation.

Herpes *circinnatus* is observed more especially among children, young people, women, and those whose complexion is fair, and skin is delicate. The causes of *chronic herpes circinnatus*, marked by its successive eruptions, are as completely unknown as are those of herpes *phlyctenodes*, or of pemphigus, when these diseases assume the same peculiar character.

Herpes *circinnatus* being the only disease of the skin which shows itself in the guise of an erythematous patch surrounded by an areola, or ring of vesicles, is easily distinguished when these are not destroyed. Should the vesicles, however, be shrunk, and replaced by a slight exfoliation of the epidermis from an exactly circular ground, this state may be confounded with erythema *circinnatum* towards its decline, or with a patch of lepra vulgaris freed from scales. In the first case some remains of vesicles on one or another of the rings will clear up the diagnosis; in the second, mistake seems next to impossible, for the erythematous rings of lepra vulgaris on the way to recovery disappear with extreme slowness; and it is very seldom, indeed, that there are not at the same time other leprosy spots to be found stationary, or whose cure is less advanced. As to favus in patches or rings—*porrigo scutulata*, or *pustular ring-worm*—this is a contagious disease, of long and uncertain continuance, and covered with scabs, which present peculiar and distinguishing characters.

Bateman recommends washes of sulphate of zinc, or borax, or alum, to soothe the itching that attends the formation of the vesicles in herpes *circinnatus*. The application of a linen rag dipped in plain cold water, and frequently renewed, answers the same end completely. Alkaline baths and saline lotions have likewise been successfully employed in this complaint. I am in the habit of recurring to slight cauterization with the nitrate of silver, with very good effects. In a word, the mode of treating herpes *circinnatus* does not differ from that which has been recommended in herpes *phlyctenodes*.

#### Historical Notices and particular Cases of the Disease.

329. Celsus, after having evidently spoken of herpes *zoster* under the name of *ignis sacer*, adds, *Alterum autem est in summæ cutis exulceratione, sed sine altitudine, latum, sublividum, inæqualiter tamen, mediumque sanescit, extremis procedentibus, ac sæpe id quod jam sanum videbatur, iterum exulceratur*.<sup>1</sup> This passage, which, in Bateman's opinion, refers to herpes *circinnatus*, is not to be interpreted in any very precise sense; but it seems to me rather to bear upon a variety of palmar *psoriasis*, which Alibert has described as a *dartre squameuse centrifuge*, than to the variety of herpes we are now discussing.

Turner has indicated this variety of herpes in a perfectly clear and positive manner, under the titles of *serpigo* and *ring-worm*.<sup>2</sup> In the fourth volume of the *Journal Hebdomadaire*, p. 197, and in the *Lancette Française*, vol. v., p. 9, some observations may be found on herpes *circinnatus*. I have given an instance (Case XXVII), of its complication with pemphigus.

#### HERPES LABIALIS.

Vocab. *Exanthema Labiale, Hydræa Febrile, &c.*

340. A slight degree of local heat, followed, before long, by a feeling of burning and tension, precedes and accompanies the formation of the clusters of vesicles that characterize herpes *labialis*. These clusters commonly form a sort of irregular ring, the circumference of which extends unequally towards the chin, the cheeks and alæ of the nose. The fluid contained in the vesicles, transparent at first, becomes turbid in the space of twenty-four hours, and then presents a yellowish-white colour, which ultimately merges into a puriform aspect. From the fourth to the fifth day of the eruption the vesicles burst or dry up; the fluid they contain escapes, or is changed into brownish or blackish scabs, which are commonly loosened about the eighth, or from that to the twelfth day, at which epoch there usually remains no further traces of this trifling inflammation beyond a slight red mark on the skin. If the scabs be picked off before they are completely dry, and a new epidermis is formed underneath, others are produced, the desiccation and detachment in which are much longer in taking place. This eruption is always attended with some degree of swelling of the affected parts.

Herpes *labialis* may be produced directly, by the action of external causes upon the skin of the lips, such as the impression of cold, occasioned by passing from a high temperature into a cold and damp air, the contact of acrid or irritating substances, &c. The complaint often appears during the course or towards the decline of an inflammation of the mouth, of a coryza, an angina, a catarrh, or a pneumonia; more frequently still does it follow an attack of intermittent fever, a circumstance that has not been noticed sufficiently by those who have treated of this slight complaint. All, however, have observed, that it was often preceded or accompanied by aphthæ, or vesicles in the mouth. I have seen the variety of herpes we are describing thrown out in the cavity of the mouth, and on the arch of the palate, accompanied by difficulty of swallowing, pains in the epigastrium, eructations, nausea, &c. Its appearance is occasionally observed to coincide with the decline or cessation of an inflammatory affection of the viscera.

Herpes *labialis* cannot be confounded with any other affection of the lips. The disposal of the vesicles in isolated groups, the considerable size which several of them attain, and their desiccation under the form of crusts, are so many particulars that preclude the possibility of confounding this disease with eczema occurring on the same parts. It is sometimes more difficult to distinguish this herpetic affection from vesicles artificially excited on the surfaces it usually invades.

Herpes *labialis* is at times a symptom of favourable augury in fevers, and the herald of a speedy recovery: *In febricantibus assidue fiunt pustulæ circà labia et nasum juxta febris solutionem*.<sup>3</sup> As in many other translations and Latin works, the word *pustulæ* is here used instead of *vesiculæ*.

This affection of the skin, which of itself is totally free from danger, rarely requires any other treatment beyond that indicated in the diseases which cause its development. Where the vesicles are numerous and confluent, however, and the pain, heat and swelling are considerable, cold and soothing lotions procure the relief, which the trifling nature of the malady often prevents patients from seeking. To hasten the desiccation of the vesicles, they may also be slightly touched with the nitrate of silver; [but if they be pricked with a fine needle on their first appearance, and the fluid they contain be squeezed out, they will be arrested in their progress, and scarcely show any scab afterwards, the unseemly appearance of which will consequently be avoided.]

<sup>2</sup> De morbis cutaneis, p. 73, 8vo. Lond. 1736.

<sup>3</sup> Ætius. Tetrabib., sermo 1, p. 234.

<sup>1</sup> De re medica, lib. v. sect. 28.



*Historical Notices of the Disease.*

341. Hippocrates certainly knew, and alludes to this eruption.<sup>1</sup> Observed by all, it has been described of late both by Willan and Bateman;<sup>2</sup> others have noticed it under the names of *eruption of the lips*,<sup>3</sup> *exanthema labiale* (Jos. Frank), *olophlyctide labiale* (Alibert). I shall not give any particular case of this slight affection, which presents few points of interest; many pathologists, indeed, have only mentioned it as a symptom common to several acute diseases.

## HERPES PRÆPUTIALIS.

Vocab. *Aphthæ, Ulcusculu præputii.*

342. Herpes præputialis is characterized by one or more groups of small globular vesicles evolved on the outer or inner surface of the prepuce, occasionally on both surfaces at the same time, and which disappear usually within the space of a fortnight.

The disease begins in one or several patches, six or eight lines in diameter, accurately circumscribed, and of a pretty vivid red colour. These are attended with a slight feeling of itchiness, more particularly towards their centre, upon which, between the second and fourth day, arise a number of small globular vesicles, containing a serous and transparent fluid, and, from their extreme tenuity, appearing to have the same colour as the parts upon which they are developed. The heat and itching increase and become more troublesome; the size of the vesicles augments, and on the third or fourth day the fluid they contain grows turbid and acquires a puriform appearance. When the eruption takes place on the inner surface of the prepuce, the rupture of the vesicles frequently happens as early as the fourth day; the epithelium is then detached, leaving the inflamed vascular rete of the corion exposed. A superficial sore is thus established, which, from the red or whitish colour it presents, and the character of its edges, which are but little raised, has often been mistaken for a syphilitic ulcer.

The character of this herpetic eruption is less equivocal when the vesicles are developed on the outer surface of the foreskin. The fluid they contain is either reabsorbed, or dries up on the fifth or sixth day; in the latter case it is changed into small dry scabs, lamellar or conoidal in their structure, which, being thrown off about the eighth or tenth day, completes the cure, if the parts have not been irritated by rubbing. It does not often happen that the accompanying inflammation is of violence enough to cause an enlargement of the lymphatic glands of the groin. Mr. Evans, however, has seen several cases of such a complication; but the inflammation of the glands never ended in suppuration.

The continual excitement to which the organs of generation are exposed, and the contact of fluids secreted by the vagina and uterus affected with chronic inflammation, are, of all the causes assigned for the production of this disease, those whose influence appears to be most fully established. I have thus seen the complaint reproduced again and again in the same individual. In similar cases, Mr. Pearson believes it may be caused by the use of mercurial preparations. Others imagine that they have observed it occurring most frequently in subjects who have had one or two attacks of venereal disease. Mr. Copland thought it occasionally symptomatic of an irritable state, or of actual stricture of the urethra. Mr. Evans and Mr. Plumbe, on the other hand, affirm, that it is often connected with a deranged state of the digestive organs. All are agreed that herpes præputialis is not a contagious complaint. Mr. Evans, it is true, mentions the circumstance of a friend of his having inoculated himself in the arm with the fluid of a vesicle developed on the prepuce, with the effect of exciting in the spot a much larger vesicle than the one that had furnished the poison. This experiment, however, repeated several times, not having been attended with the same consequences, and being in other respects inconclusive, the production of the variety of

herpes under consideration, even from Mr. Evans's showing, must be held to be independent of any specific cause.

The vesicles of herpes præputialis cannot be confounded with the syphilitic pustules and tubercles which are occasionally formed on the prepuce: each of these forms of inflammation has its own peculiar and distinguishing features. The *venerola vulgaris* of Mr. Evans is, of all the diseases of the organs of generation, that which might most readily be confounded with herpes præputialis. The venerola, however, commencing by a single pustule, and herpes being first perceived as a cluster of small vesicles, the two complaints may always be discriminated. Farther, the thin, scaly incrustations of herpes præputialis can never be confounded with the thick scabs of *venerola vulgaris*. The diagnosis is, indeed, more difficult when these affections occur on the inner surface of the foreskin, and have passed into the excoriated state. The patients are generally unable to say whether the inflammation was at first vesicular or pustular. The prepuce, too, may be in such a state of accidental inflammation, when affected with herpes præputialis, as to make the diagnosis uncertain for several days. The superficial excoriations of the herpes, however, are very different from the ulcers of syphilis, remarkable for their depth, their hard and raised edges, and the small gray-coloured false membrane that covers their bottom. In fine, the small, thin, flattened incrustations of the herpetic affection cannot be taken for the scabs of syphilitic pustules.

Herpes præputialis is a disease of no severity, and gets well commonly in the space of a week or two. When evolved on the outer surface of the foreskin, it is seldom that we are consulted by patients, unless, indeed, the vesicles have been excoriated or inflamed by the rude contact of the clothes, or the improper use of some irritating local application. It is generally best to leave the eruption to itself, only protecting the part against friction, inasmuch as all that interferes with the desiccation of the vesicles delays its cure. Mr. Evans knew a case in which this was prevented for six weeks, in consequence of the pains that were taken, by a variety of applications, to hinder the little vesicles from becoming covered with scabs. When the vesicles are situated on the inner surface of the prepuce and have become excoriated, their cure may always be brought about by the introduction of a small quantity of lint between the glans and the foreskin, or by the use of simple cold water, or acetate of lead washes. Herpes præputialis may recur repeatedly, at intervals so close together as to present all the characters of a continued chronic affection; in this case we often find a chronic inflammation of the urethra existing at the same time. The duration of herpes præputialis may be shortened by cauterizing the vesicles superficially.

*Historical Notices and particular Cases.*

343. Herpes præputialis, vaguely signalized under the names of *aphtha* and *ulcuscula præputii*, which were also applied to aphthæ or solitary vesicles, has been in more recent times carefully described by Royston,<sup>4</sup> Mackechnie,<sup>5</sup> and Evans.<sup>6</sup> I shall give a single case; others have been published in different periodicals and works of the day.<sup>7</sup>

CASE XLI. *Herpes præputialis: slight inflammation of one of the glands of the right groin.* M. N \* \* \*, forty years of age, married, and never having had any venereal affection. His wife has, for years, been subject to leucorrhœa, which is always more copious than usual after the menstrual periods. On the 3d of August, 1820, M. N \* \* \* came to ask my advice for an inflammation of the prepuce that had continued three days, and presented the following characters: on the exterior of the prepuce there were three small clusters of from eight to a dozen of rounded and semi-transparent vesicles; several other minute vesicles, and slightly excoriated points, were also seen on different parts of the inner surface of the prepuce, each

<sup>4</sup> History of an eruptive disease of the integuments of the penis. Medical and Physical Journ., vol. xxiii.

<sup>5</sup> Observations upon herpes of the prepuce. (The Edinburgh Medic. and Surgical Journal, vol. vii.)

<sup>6</sup> Pathol. and pract. remarks on ulceration of the genital organs. Lond. 1819, p. 27.

<sup>7</sup> Journ. Hebdom., t. vii. p. 436. Journ. Complement, t. xli. p. 438. Several remarks on the complication of the disease with stricture of the urethra, may be found in the Revue Médic. pour Juin, 1830. Observations on the use of Lactucarium in the affection, by M. Rothalius, are contained in Ferussac's Bullet. des Sciences Méd., t. xxii. p. 105.

<sup>1</sup> Febres in quibus ulcerantur labia fortassis intermittentes. (Hippocrates, à Van der Linden, t. i. p. 821.)

<sup>2</sup> On the diseases in London, p. 6, 1801.

<sup>3</sup> Journ. gén. de médecine, t. xxxii. p. 240.



of which might have been covered with the head of a pin. The inner surface of the prepuce was more inflamed than the outer. The subjacent cellular membrane was itself a little swollen, and the foreskin could not, without pain, be retracted towards the base of the glans. One of the lymphatic glands of the right groin was slightly swelled and painful. All the other organs of the body seemed healthy. No change was made in M. N \* \* \* 's mode of living. The affected part was wrapped in soft linen to prevent it from being rubbed. The vesicles burst two days after I first saw the case, and for the most part, became covered by small, thin, blackish incrustations. A slight degree of excoriation succeeded the vesicles on the inner surface of the prepuce. This excoriation was washed with decoction of althea, and on the 15th of August the affection of the prepuce and the swelling of the gland in the groin had both disappeared.

HERPES VULVARIS, HERPES AURICULARIS, HERPES PALPEBRALIS, &c.

344. Vesicles of a kind similar to those of herpes *præputialis*, are occasionally developed on the upper eyelid in certain cases of ophthalmia, on the concha of the ear, in external otitis, and on the labia majora in women labouring under leucorrhœa, during pregnancy, or after delivery: a young woman had been confined a month; the labour and all besides had been prosperous; the lochia had disappeared on the fifteenth day, but a slight mucous discharge had still remained. This young woman took a very long walk, and the same day began to complain of uneasiness in the upper parts of the thighs, and of darting pains in the vagina, which wholly prevented her from sleeping. About the parts where the labia majora are continuous with the skin of the thighs, I observed two groups of vesicles, the greater number of which were globular like small peas, transparent, and so closely connected as to form little irregular bullæ. A plentiful secretion of mucus was pouring from the vagina, which was affected with shooting pains, over the labia and parts affected. A few hip baths, and the use of emollient and saturnine washes, soon put an end to these symptoms.

I also, on one occasion, had a young tradesman under my care, on the back of whose hands a great number of vesicles, similar to those of herpes labialis, had appeared. When I first saw him several of these vesicles had dried up, but others contained a sero-purulent fluid. An eruption of a like kind was repeatedly produced on the hands of a lad whose occupation was grinding colours, and who was in the habit of washing in water made very acid, after rubbing his hands over with soft soap. I have seen the same sort of eruption on the palms of the hands, and on the cushions of the fingers without any assignable cause. In these cases the fluid of the vesicles being covered with a very thick cuticle was in part reabsorbed.

#### HERPES IRIS.

345. Herpes *iris* is distinguished by small groups of vesicles surrounded by four concentric erythematous rings of different shades of colour. Patients affected with this eruption often compare it to small party-coloured cockades.

Herpes *iris* occurs most frequently on the backs of the hands, on the instep, olecranon, ankles, and similar parts. It commences with small circular red spots, composed of concentric rings of various shades, and which spread by degrees from two to perhaps eight lines in diameter. In the centre of each of these spots, from the second to the third day, there appears a flattened vesicle of a yellowish white colour, surrounded itself by several others of a smaller size, arranged in a ring. The central vesicle is surrounded by a first circle of a dull brown colour; this by a second, more external, and nearly of the colour of the central vesicle; this second is in its turn surrounded by a third circle of a deeper red; the third circle by a fourth, the areola around which is formed on the seventh, the eighth, or the ninth day, and presents a rosy hue which melts insensibly into the natural complexion of the skin. Of all these rings the third is usually the narrowest; they may all become covered with vesicles;

the first is most generally found so circumstanced. From the tenth to the twelfth day the fluid of the vesicles is reabsorbed, or it escapes and dries off under the form of superficial scabs, which are detached before the end of the second week.

Herpes *iris* has been observed to occur most frequently among children and females, either by itself or along with some of the other varieties of herpes. It is, however, very different from every one of these, and is the only form of cutaneous disease that is surrounded by several concentric rings. When the central vesicle has been destroyed, and the rings are not well marked, the disease is apt to be mistaken for roseola *annularis*; this, however, differs from the herpetic affection by the greater breadth of its discs, which occasionally extend beyond the space that would be covered by a crown-piece, and by the absence of vesicles or any remains of vesicles.

Herpes *iris* gets well spontaneously in the course of a week or a fortnight. Its period may be shortened by touching the vesicles slightly with the nitrate of silver. When blood-letting has become necessary on account of some co-existing affection, this evacuation has been found to shorten the continuance of the eruption. (a)

#### Historical Notices and particular Cases.

346. Herpes *iris* was established as a distinct species by Dr. Bateman, who has given an accurate description, and published a good figure of the disease. Dr. Marshall Hall<sup>1</sup> has given a lengthened history of its progress; and M. Ledebor<sup>2</sup> has related the circumstances attending a hereditary cutaneous disease which he thought analogous to the herpes *iris*. Alibert classes this eruption with his group of *ophlyctides*.

CASE XLII. Herpes *iris* affecting the regions of the olecranon and patella.—Michel, twenty-seven years of age, was admitted a patient to the fourth Dispensary on the 9th of March, 1826, and placed under my care and that of my colleague, M. Bayle. On the 5th and 6th of March, Michel had felt pains of the hips, elbows, hands and knees. On the following days these different parts became covered in succession with a vesicular eruption; but the patient continued at work as usual. The patient appears stout, of a sanguine and bilious temperament, and tells us he had an attack of the same kind last October, till which time he never suffered from any disease of the skin. On the 9th, vesicles, which had been thrown out on the lips six or seven days previously, were covered with thin brownish incrustations, and presented the characters that belong to those of herpes *labialis*. A single vesicle, situated on the upper lip, still contained fluid. The eruption over the olecrana and knee-pans, consisted of the herpes *iris*, and had only appeared within the last four days. The vesicles, which are about twenty in number on the right arm, less numerous on the left, are of the following description: in the centre of an inflamed surface, from four to six lines in diameter, a small vesicle, of a yellowish white colour, containing a little serum, and beginning to dry up, is perceived. The central point now described, is surrounded by a first ring of a reddish-brown hue, this by a second, nearly of the same pale yellow colour as the middle vesicle; a third ring, which is the narrowest, succeeds, and is of a deep red; and four days later, a fourth and more eccentric ring surrounded the whole, the rose red colour of which was insensibly lost in the natural colour of the neighbouring skin.

The vesicles about the knees were precisely similar in their characters. I ought to add, however, that upon the back of the right hand, and in the vicinity of the vesicles developed on the elbows and knees, there existed a small number of globular vesicles similar to those of herpes *phlyctenodes*, and containing a little limpid and transparent serum. These vesicles were all affected with a severe tingling, smarting pain. (*Venes. ad 3vi; bath; barley-water for drink.*) The desiccation of the vesicles was completed on the succeeding days,

(a) With Dr. Thomson, we are disposed to think well of moderate and gentle aperients in this species of herpes; to be followed by Fowler's solution and vegetable decoctions. A small piece of soap plaster is a useful topical application.

<sup>1</sup> Case of a particular eruptive disease. (Edinburgh Med. and Surg. Journ., 1820.)

<sup>2</sup> Bulletin des Sciences médicales de Férussac, t. xviii. p. 70.



and on the 15th of the month a few circular red stains upon the parts that had been affected were all that remained of this slight disease.

CASE XLIII. *Inflammation of the mouth; herpes iris.*—Fr. Germain, aged nineteen, of a lymphatic temperament, came into the hôpital de la Pitié on the 15th of April, 1826, on account of an inflammatory affection of the mouth, and a disease of the skin. In the month of April, last year, the patient had had an attack in the skin similar to the one he now labours under.

April 16th. On the legs and arms a number of spots are observed, the diameters of which vary from two to eight lines; one of them, nearly the size of a six-penny piece, is situated on the lower and outer part of the left arm; another at the bend of the arm; six more, two of which are as large as lentils, occur on the forearm, and a greater number are scattered over the left lower extremity. Two of those on the upper and outer part of the thigh are very close together; on the opposite lower limb several spots of the same kind occur, and two are visible on the buttocks. The greater number of these spots are formed by several concentric rings of a red or pink colour, each by its difference of shade rendered distinct from the others. The centres of all are occupied by a small, thin, brown scab, proceeding undoubtedly from the desiccation of a vesicle, from which, indeed, the patient says he evacuated the fluid by scratching the spots, which he knows made their appearance very lately, though he cannot tell precisely when. The spots are circular; the dimensions of the concentric-coloured rings vary, but are in proportion to that of the spots. Round the yellow central point there exists a first circlet of a deep red colour; this is inclosed within a second, more eccentric ring of a pink hue; these two rings are further surrounded by a third, of a deep and dusky red like the first; lastly, a fourth ring of a rose tint, which is gradually lost in the skin about it, encircles the whole. In the course of the next and succeeding days the second ring became covered with vesicles, and of a white colour, but the patient soon tore it with his nails, when a few drops of serum escaped. The whole of the spots were excessively itchy. By the 20th the little scabs in the centres of the spots had fallen off and exposed the pink surface of the corion, covered with a new epidermis.

The affection of the mouth had begun nearly twelve days before the patient sought admission into the hospital, by the development of aphthæ and an increased secretion of saliva. Two days afterwards, the swelling of the lips was followed by that of the tongue, and anon by inflammation of the throat. Deglutition became difficult and painful. The lips were covered with brownish or yellow incrustations. April 16th, the commissures of the lips are bleeding and inflamed; their mucous membrane, as also that of the gums, cheeks and palate, are covered with aphthæ or white prominent spots accurately defined on the inflamed mucous surface. The tongue is moist, and its upper surface is covered with a thick and whitish mucus. The mouth feels clammy, tastes bitter, and is so violently inflamed that the patient can scarcely unlock his jaws. The epigastrium is painful; there is considerable thirst; the bowels are constipated; there is no fever. (*Low diet, soothing gargle, barley-water for drink.*) 17th.—Greater swelling of the lips than yesterday; white confluent patches on the inner surface of the cheeks. (*Prescriptions as before.*) 18th.—The inflammation of the mouth has abated, and the secretion of saliva is less profuse than it was; bowels still unmoved. (*A glyster; a bath; broth and milk for food.*) 19th.—Desquamation over the upper surface of the tongue, which appears of a bright red colour, as in convalescence from scarlet fever. 20th.—The patient could open his mouth without pain; the inflammation declined gradually, and the patient was quite well by the 30th.

#### ECZEMA.

Vocab. *Eczema, Dartre, Gale, Tinea.*

347. Eczema is a non-contagious inflammation, often confined to a single district of the skin, characterized in its commencement by an eruption of very minute and not prominent vesicles, which are commonly very closely set or crowded together, and terminate either by the reabsorption of the fluid they contain, or by the formation of

superficial moist excoriations; to which succeed furfuræ and squamæ, or renewed eruptions of vesicles of the same nature as those that had preceded.

Although commonly limited to a single part of the body, eczema may become general, and appear simultaneously or successively in different districts. It seems in general to attack those regions in which the follicles are numerous and particularly apparent, such as the hairy scalp, the ears, more rarely the face, the trunk, the roots of the nails, the backs of the hands, and the superior extremities generally. It occasionally extends to the mucous membranes. In men it is often seen on the inner parts of the thighs, on the scrotum and verge of the anus; in women, it is occasionally developed on the mucous membrane of the nipple, vulva, and rectum; in children it particularly affects the face and hairy scalp, and occasionally extends to the inside of the mouth, to the nasal fossæ and external ear.

Eczema is *acute* or *chronic* in its type. In every case the disease is distinguished by the occurrence of one or several successive crops of eruption on the same region, or on different parts of the body. The vesicles themselves are agglomerated in broad patches, or arranged in irregular clusters; they very rarely take the form of bands in their disposition. When eczema is general, the whole of these varieties are occasionally witnessed in the same individual, in different degrees and in various stages of their progress. Under other circumstances one of them only is displayed with all its distinguishing characteristics.

348. *Symptoms.*—In acute eczema the eruption of the small vesicles that characterize the disease is announced by a sensation of smarting and sometimes by actual pruritus. They appear with or without redness, heat or tension of the skin, and present three varieties which are well described by Willan: 1st. *Eczema simplex*. 2d. *Eczema rubrum*. 3d. *Eczema impetiginodes*.

1st. *Eczema simplex*. In this generally very mild variety, the skin, covered with vesicles, almost always preserves its natural colour between the clusters. There is neither heat nor tumefaction; the vesicles, extremely minute, contain a globule of limpid serum, and usually correspond with the minute projections whence the hairs issue, and which may be very distinctly seen by examining the insides of the arms and thighs with attention. When the serum of the vesicles is reabsorbed, the cuticle that concurred in their formation shrivels, and is detached in the shape of a very minute plate or scale. More frequently still, the vesicles, after having existed for several days, burst or are ruptured by scratching, when the drop of serum escapes and gives place to a yellowish-coloured speck which, being before long thrown off, leaves a little pink spot, now dry, now moist and surrounded by a whitish circle, upon the skin. When the spot is moist, a very minute pore is perceived, whence a small quantity of serous fluid distils, which drying up forms a scab the size of a pin's head. Occasionally also, layers of the cuticle, altered in their nature, and thickened from the adhesion of the dried fluid of the vesicles, are detached from the skin. And it is at this stage that frequently, and without known cause, a new eruption of vesicles takes place, which follows in every particular the course of the first, when the eczema becomes chronic.

A variety of *eczema simplex* has been described by one of my pupils, Dr. Levain, which is not noticed by Willan, nor by any of the other pathological writers who, since his time, have given particular attention to the diseases of the skin. This variety is distinguished by clustered patches of vesicles, the dimensions of which vary from those of a sovereign to those of a two sovereign piece. The vessels of these clusters are numerous, very small, and in all respects similar to those of the other varieties of eczema, consequently they are much more minute than those that characterize herpes *phlyctenodes*. The clusters are scattered over the skin, which only appears red in the places affected. On the red patches covered with vesicles, the cuticle may sometimes be raised and removed in a single piece. Its inner surface looks moist, and covered with small whitish or deep yellow points produced by the fluid of the vesicles. The corion beneath is red, but not ulcerated; the clusters of vesicles here bear a resemblance to those of the herpes *præputialis*; and the variety of eczema we are describing, seems the link of connection between these two genera of vesicular eruptions.



*Eczema simplex* often extends to the whole surface of the body, especially in children, young persons, and subjects of an irritable constitution. The disease in general soon gets well, and relapses are not frequent. The diseases with which it may most readily be confounded are *certain vesicular eruptions, artificially produced* by the action of the sun's rays, and *lichen simplex*. To avoid mistakes in regard to the latter, it is enough to remember that the vesicles of the eczema contain serum, whilst the elevations of lichen are solid and yield a drop of blood when they are punctured.

2d. The inflammation of the skin is occasionally more intense than in the variety just described, and the disease is then entitled *eczema rubrum*. The part which is about to be affected with this eruption, swells, becomes hot, red and shining as in erythema and erysipelas. It is soon covered with small confluent vesicles, transparent at first, but speedily becoming milky, which burst anon, and pour out a little red-coloured serum. At a later period the cuticle, saturated with this fluid inspissated, becomes softened in some points and detached in others, when it dries into yellowish laminæ of little thickness, which are soon replaced by slight incrustations proceeding from the drying of the fluid poured out by the diseased surfaces. Lastly, the skin here and there presents small pink points around which the cuticle forms a true border with a jagged edge, indicative of the dimensions of the vesicles.

When *eczema rubrum* is very intense, the heat, redness and tension continue or even increase during several days; the vesicles are evolved, and burst with great rapidity; the fluid they pour out irritates still more the parts already very painful, and by its contact gives rise to excoriations of varying extent. The skin, stripped of its cuticle, and inflamed, appears beset with a multitude of pores each of which might be covered with the head of a small pin, from whence a red-coloured fluid exudes, sometimes in such profusion as to soak the clothes of the patient.<sup>1</sup> At other times the small vesicles unite, become blended together and form irregular bullæ analogous to those observed in certain cases of erysipelas. The epidermis, detached over a considerable space, bursts at length, a torrent of serum escapes, and the sub-epidermic layer now exposed and greatly swelled, besides the pores that have been already mentioned, presents false membranes of a whitish colour and soft consistency, which adhere slightly to the structures beneath. The serous exudation soon becomes less in quantity and ceases entirely; the cuticle, moist at first and slightly adherent, becomes of a yellowish or greenish colour, by being soaked in the fluids exuded; it then dries, falls, and is replaced by other laminated incrustations of a firmer and more permanent description. The skin loses by insensible degrees its tension and increased heat; the redness also declines, and the parts slowly recover their natural condition, the return to this being announced by the formation of a new and healthy cuticle. It frequently happens, however, that fresh eruptions break out, and the *eczema rubrum* becomes chronic.

3d. *Eczema* and *impetigo* have between them many strong points of resemblance, as well in reference to the parts of the body most commonly affected, as perhaps in regard to the constituent element of the skin, the follicles, in which they are both evolved; it is not, therefore, uncommon to meet in the same individual with *impetigo* affecting one quarter, and *eczema* developed in another. It often happens also that we find a mixture of the vesicles of *eczema* and of the pustules of *impetigo* covering surfaces of the integuments of greater or less extent, and still more frequently do we find the vesicles of *eczema* becoming purulent and giving occasion to an anomalous variety of the disease which has been described by Willan under the title of *eczema impetiginodes*. When this variety makes its attack in an acute form, the tension, heat and redness are considerable; it is not now mere tingling and itching that are complained of, but shooting and violent smarting pain. The vesicles now pass rapidly into the purulent state; the cuticle, raised in large flaps, is impregnated with the fluid effused, and acquires the appearance of greenish-coloured laminated scabs, which being before long detached, a surface is exposed of as bright a red as carmine. When the eruption is considerable, the ichorous fluid secreted is so profuse that dressings of every kind, and even the bed-clothes and bedding become drenched

<sup>1</sup> The disease in this form is described by French authors under the title of *dartre humide*.

with it; the smell of this matter too is as offensive as possible; it is faint and sickly, and something like that which a large burned surface, in a state of suppuration, diffuses. Around these *impetiginous* *eczemas* we commonly observe a tumid red circle, the surface of which is studded with small vesicles, transparent, milky or dry, according to their ages, and in all respects analogous to those that characterize *eczema rubrum*. The vesicles and incrustations are occasionally renewed successively and the disease becomes chronic.

*Eczema impetiginodes* may last several weeks, be transferred from one place to another, or lastly attack almost the whole surface of the integuments; most commonly, however, it implicates but a single region. When it shows no tendency to pass into the chronic state, all the symptoms decline, the inflammation lessens, the laminated incrustations fall off, the cuticle is reproduced, and the skin, of a violet colour, is unaffected afterwards, save by a slight exfoliation.

The three acute forms of *eczema* that have now been described, present shades of extreme variety. Most usually the morbid symptoms do not extend beyond the parts affected, or the structures in the immediate neighbourhood of these. Nevertheless when the eruption is very extensive, it is accompanied by disordered actions of a general nature; the pulse becomes frequent; there are thirst, anorexia, and the sleep is disturbed. The pain is increased by the heat of the bed; motion at times is impossible or attended with extreme suffering. The most common complications are inflammations of the lymphatic glands in the vicinity of the affected parts, and in some cases, especially in children, inflammatory disorders of the stomach or intestines.

4th. *Chronic eczema*. The three varieties of inflammation of the skin which constitute *acute eczema* may occur with the *chronic* character; this is even, it must be noted, the tendency of the varieties entitled *rubrum* and *impetiginodes*. After the bursting of the vesicles the inflammation often increases in severity, extends to the deeper structures of the skin, and even to the subcutaneous cellular tissue. Irritated by repeated eruptions of vesicles, and by the contact of an acrid ichor, the skin becomes excoriated, and presents chaps and fissures which every movement tends to make deeper and more extensive, especially if the disease occurs between the fingers, on the nipples, verge of the anus, or in the popliteal regions. In the greater number of cases the affected districts of skin present at first the appearance of a blister in a state of suppuration, and pour out a purulent serous fluid, of a disagreeable smell, which quickly penetrates any dressing that may be applied. These humid *eczemas* occasion intense pruritus, accompanied by severe smarting pains; the skin, highly inflamed, is stained with blood, looks of a violet colour, and seems beset with an infinity of minute pores, from which a sort of serous dew distils. Tormented by pruritus of the most violent description, patients thus affected talk of nothing but *heat of blood, inward fires*, &c. They cannot forget themselves in sleep; their sufferings, lulled for an instant, often return suddenly and without appreciable cause; nothing can then prevent or moderate the energy with which they begin to scratch themselves; a bloody serum flows from the torn surface of the skin; but, nothing assuaged, the pruritus continues as unbearable as before, particularly when the perineum, orifice of the vagina, or verge of the anus is the part affected; when left to itself, this cruel state often continues for months and even for years.

When the inflammation declines in severity, *chronic eczema* assumes another character. After the lapse of a longer or shorter interval, the vesicular, or vesiculo-pustular eruptions become rarer, and even end by not appearing at all; the scabs, at first moist and thick, and reproduced as soon as detached, grow thinner and thinner, drier, and more adherent to the skin, which at length appears covered by small, yellowish-coloured scabs,—the *dartre squameuse* ou *furfuracée* of some authors—among which, several bloody incrustations, the consequence of the excoriations caused by the nails of the patient, may be detected. The serous exudation is replaced by a simple epidermic exfoliation, to a greater or smaller amount. The more severe these *eczemas* have been, and the longer they have continued in this state, the longer is their complete disappearance expected, even after amendment has begun, and longer still are certain sequelæ, by which the previous existence of the disease may be certainly recognized, of being completely obliterated. Should a fresh eruption of vesicles chance to



appear on surfaces which either have been or are still affected with eczema, the new eruption bursts more quickly than that which is evolved on regions that have never before been attacked; these fresh crops scarcely continue entire above five or six hours in the former of these cases, a circumstance which is undoubtedly owing to the tenuity of the newly-formed epidermis. Lastly, it happens occasionally that slight vesicular eruptions are thrown out under the epidermis, thickened and altered by prolonged disease.

349. Having now described in a general way the *acute* and *chronic* states of eczema and the chief varieties presented by the affection, I shall proceed to speak of the peculiarities presented by the disease as it affects different regions of the body.

1st. *Eczema of the hairy scalp* (*teigne muqueuse*, Alibert; *porrigo larvalis*, Willan). Extremely frequent among children at the breast, of three, five, and eight months old, and at the period of the second teething, it not uncommonly attacks young persons of both sexes, especially such as have fair hair and a fine and delicate complexion, with a scrofulous taint and lymphatic constitution. This variety, which has been separated erroneously from the group of eczemas, and variously placed among the *tineas* and *porrigos*, appears at one time on a portion, and at another invades the whole surface of the scalp, extending occasionally even to the ears, nape of the neck, forehead and face. In very young infants the vesicles of this eczema spread over the scalp and temples, and soon become covered with thin scabs that increase in thickness as the exudation continues. The swollen hairy scalp, indeed, pours out a profusion of a viscid fluid which glues the hair into masses or layers, and in drying, forms yellow or brown lamellar incrustations. In this acute state the head is hot, and the scalp appears injected and tense; children are then tormented with a pruritus of the affected parts, the violence of which cannot be expressed by words, and which seems to gain in intensity when their heads are uncovered and exposed to the air; they rub them violently upon their shoulders, and, if their hands be at liberty, they scratch themselves with the greatest imaginable eagerness, though the blood constantly follows the nail.

When the hair has been cropped with care, and the scabs got rid of by means of emollient poultices, the hairy scalp appears to be covered with a sort of cheesy matter. Occasionally the inflammation extends to the subcutaneous cellular membrane, which forms small prominent tumours attended with very severe pain, usually ending in suppuration. The lymphatic glands of the nucha and parotid regions swell and grow painful. In some cases the vesicles of the eczema are mixed with the pustules of impetigo, and the incrustations formed are then much thicker and more adherent than wont. An immense quantity of pediculi usually appear on the scalp at the same time.

Eczema of the hairy scalp often extends to the forehead, temples, face, nape of the neck and shoulders.

If the children attacked with this disease be carefully attended to, if the incrustations be gently removed by means of lotions and soothing cataplasms, the inflammation of the scalp declines, and the exudation from its surface usually ceases within one or two months at farthest. If these measures be neglected, the caps and other articles applied to the head become impregnated with the fluid secreted by the inflamed surface and increase the pruritus; the inflammation becomes chronic, and extends more deeply; the bulbs of the hair inflame, and often cease from their functions over a considerable extent of surface; the scalp at the same time assumes a furfuraceous appearance on some of the inflamed points (*teigne furfuracée*, Alibert).

When the ichorous exudation ceases suddenly, either naturally, or in consequence of ill-timed medication, and the incrustations grow hard and friable, children become dejected, taciturn, restless and evidently unwell. On the other hand, when the exudation is very abundant, the principal functions are frequently performed with the most perfect regularity, and the health of the little patients seem occasionally even to improve during the whole period that the disease continues. I shall add further, that those children who labour under eczema of the face and hairy scalp whilst they are teething, rarely suffer from convulsions or obstinate diarrhoeas. This remark is in accordance with the result of M. Billard's observations, who tells us that, at the Foundling Hospital of Paris, he noticed a considerable

number of infants at the breast attacked with eczema of the scalp (*teigne muqueuse*), who, after the slow and natural cure of the disease, were remarkable for the freshness of their colour, and their excellent state of health. Among adults, *chronic* eczema of the scalp seizes particularly on individuals of a lymphatic and scrofulous habit of body. Women at the critical period of their lives are more frequently attacked than men. The greater number of these cases of eczema, *humid* and *secreting* at first, become at a later period *squamous* and *furfuraceous*; the swelling, redness and heat of surface are then almost wanting, and the scalp freed from the squamæ that covered it, appears somewhat red and shining. The squamæ are occasionally of a silvery and pearly lustre, and very much resemble the pellicles that envelop the sprouting feathers of young birds. Occasionally tufts of five or six hairs are bound together, as it were, at a short distance from their roots and free ends by these squamæ. In this state the disease is not accompanied by any great degree of itchiness, and the head has no particular odour.

Chronic eczema of the scalp now and then spreads to the ears and eyebrows; it also occasionally attacks the margins of the eyelids, causing the fall of the eyelashes, and a chronic ophthalmia of a very intractable description.

Eczema of the hairy scalp is a disease that is very rarely met with among the aged, in consequence probably of the alterations that have taken place in the organization of the skin. I have oftener than once seen the disease coincide with a more than usually copious secretion of cerumen. (a)

2d. *Eczema of the face*. In young children eczema of the face often accompanies that of the hairy scalp and of the ears; many authors have described the affection under the title of *crusta lactea*. It usually appears on the forehead, the cheeks and the chin; the small vesicles that characterize it, are arranged in irregular clusters, and scarcely rise above the level of the skin, which soon assumes an erythematous blush; within four or five days these vesicles burst, and pour out a viscid and yellowish fluid which concretes and turns into thin yellowish-green coloured scabs; fresh vesicles are before long developed around the circumference or in the immediate neighbourhood of these clusters; the fluid they contain is shed on the surface of the skin, at the same time that a considerable exudation takes place below the first formed squamæ or scabs, which adds farther to their thickness and extent. If this disease be left to itself many eruptions occur one after another, until the whole countenance is covered with yellowish laminated incrustations. The serous or sero-purulent fluid secreted, is often very copiously shed under the laminae and scabs; the skin is of a vivid red, and appears beset with a multitude of minute pores which are covered with slight false membranes of a milky white colour; it becomes chapped and excoriated on the cheeks, at the angles of the mouth, and in the furrow between the lips and the chin, and these tender places are all made worse by the act of sucking, crying, and the contact of the tears; the disease in this state has all the distinguishing features of *eczema impetiginodes*. At a still more advanced period, eczema of the face presents all the characters of a chronic inflammation; the vesicles are few, the discharge becomes smaller in quantity, ceases at length, and the skin is endued with dry and grayish-coloured scabs, which are thrown off without being reproduced; the diseased surfaces, covered with a cuticle of extreme tenuity, continue long to show an erythematous

(a) "Of the diseases of the scalp which I have been called upon to treat during the last twenty-eight months, amounting to above 280 cases, more than 180 were cases of eczema; seven were cases of herpes; sixty-five were cases of impetigo; six were pityriasis; eight were cases of psoriasis, or lepra; and eleven only were cases of porrigo. From inquiries I have made among persons whose opportunities of observation have been favourable, I am inclined to think that the proportion shown in my own experience is about that which is usually observed. It is true that now and then the proportion would seem to be different; but the variance is unquestionably owing to particular circumstances. Porrigo has broken out in a school or a family, and has been rapidly communicated by contagion, so as to swell the proportion of the latter disease." (Mr. Phillip's Lect. on surgery, in Med. Gaz., 1840.)



blush, and are then affected with a furfuraceous desquamation, which also ceases at last. The excoriations and fissures which attend eczema of the face never leave cicatrices behind them. Those that do occasionally remain are effects of the wounds which children inflict on themselves with their nails; to prevent them from doing mischief, therefore, it is proper to confine their hands during the night, for without this precaution I have seen many who made their faces bleed with scratching.

Eczema of the face sometimes spreads to the margins of the eyelids, to the mucous membrane of the mouth and nasal fossæ, and to the conjunctivæ; the epithelium, where it exists, is rapidly destroyed, and is replaced by small patches of whitish false membrane. When the eczema of the eyelids extends to the conjunctivæ we have all the symptoms of acute ophthalmia: the eyes become red and injected, watery, and sensible to light; the free edges of the eyelids are swollen and cedematous. When eczema occurs in the nasal fossæ, it causes a very troublesome sense of itching, and a very copious flow of a serous fluid. This disease seldom attacks the mouth; I have seen it confined to the under lip, round which it formed a kind of ring; it happens occasionally that the mucous membrane of the mouth, which appears to be generally red and swollen, presents here and there small superficial ulcers like aphthæ, and children then excrete a great quantity of saliva.

In adults, *eczema rubrum* and *impetiginodes* of the face are often attended by a general swelling of the features, and an œdema of the eyelids similar to that which is observed in phlegmonous erysipelas. Eczema of the face differs from this form of inflammation by being essentially a disease of long continuance, and by the skin, instead of exhibiting a simple exanthematous inflammation complicated with occasional phlyctenæ, presenting a vesicular, or a vesiculo-pustular eruption, generally accompanied with a severe itchy heat of the surfaces affected. When eczema of the face has passed to the chronic state, the serous exudation is almost insensible, the face becomes covered with bran-like scales, which fall off, and are renewed repeatedly; the eyebrows and eyelids now and then lose their hairs. I have seen this variety, which is very intractable, more especially in young girls of a lymphatic temperament, whose menstrual discharge is irregular, or in whom this evacuation is not yet established. It is very seldom seen among the aged.

3d. *Eczema aurium*.—This is one of the varieties most commonly met with in the two sexes at all ages. It often occurs to women at the period of the menstrual cessation. Lorry has specified its characters accurately (*de auribus suppurantibus*). Infants are attacked with the disease at a very early age; and it frequently coincides with eczema of the scalp, or face, the development of which it occasionally precedes or follows. It must not be confounded with intertrigo, a kind of erythema of the posterior parts of the ears, attended with chapping, and some slight exudation. I have also seen many cases of this affection among young women from fifteen to twenty years of age, who either had not yet menstruated, or who had menstruated very irregularly. When this eczema appears with the acute character, the ears become red and swelled to such a degree that their size is often doubled; a reddish fluid flows rapidly from the vesicles, chaps and fissures are formed, and the inflammation is propagated to the meatus auditorius, around which small purulent abscesses are occasionally formed that prove excessively painful. The sense of hearing is either perverted or lost for a time; the lymphatic glands in the vicinity swell. This eczema most usually becomes chronic; the skin is covered with lamellæ of a deep yellow colour, very similar to cracked strata of yellow bees-wax; a reddish fluid, the flow of which is increased by pressure, exudes from the fissures. Often, when the diseased parts appear to be returning to their natural state, all at once and without known cause, a new eruption appears.

Eczema of the ears is usually a very obstinate disease when it attacks females at the critical age; it gets well, on the contrary, readily and naturally in children, when it has broken out during the process of teething. Pieces of sponge or tents of lint have by some been recommended to be placed in the meatus auditorius to prevent the contraction of this passage; but the precaution has more inconveniences than advantages. When the eczema is acute in its character, more good is done by blood-letting, the application of leeches, and the

use of pediluvia and aperients; and when the disease is of a chronic nature, the swelling of the subcutaneous cellular membrane seldom goes so far as to make any precaution of the kind mentioned necessary. It rarely happens that eczema of the ears does not extend to the parotid regions and hairy scalp; the two ears are also most commonly affected at the same time; but the disease seldom attains the same degree of severity in both.

4th. *Eczema mamillarum*.—Eczema of the nipple is a much more uncommon disease than the varieties I have hitherto described; I have never met with it in young children. M. Levain has collected several cases of its occurrence in young women who were nursing for the first time. It is of consequence not to confound this affection with erythema and chapping of the nipples, which are much more frequent complaints with young nurses. It is occasionally observed, especially in the chronic form, in young girls and grown women who have never given suck. The inflammation is at times transferred from one nipple to the other; very violent itching is felt, and a yellowish or reddish serum flows abundantly from the affected parts, and rapidly penetrates any dressing that may be applied. The mucous membrane of the nipple, inflamed over its entire surface, although in an unequal manner, presents small excoriations like linear scratches; some points are of a bright red, moist, studded with sero-sanguinolent drops; others are covered with yellowish scabs, which are thick in the middle, and decrease towards their circumference. This complaint is usually attended with severe pruritus, which increases on the approach and during the continuance of menstruation. The nipples remain scaly for a long time after the inflammation has subsided: they are moist and exuding one day, dry and scaly the next. At length, after many recoveries and as many relapses, the pruritus ceases, the serous exudation appears no more, and the parts are covered with a new epithelium, smooth and uniform like that which covers the healthy surface. I have never observed eczema of the nipple in the male. It is important, as I have already said, to distinguish eczema of the nipple from simple chapping or cracking of the part; and above all, not to mistake it for a syphilitic affection; it is usually very intractable, may continue for years, and requires active treatment on its first invasion.

5th. *Eczema umbilicalis*.—The skin of the umbilical region bears great affinity to that which surrounds the natural openings. Eczema of the umbilicus consequently very much resembles that of the nipple and vulva. It has been mistaken for a syphilitic blenorrhœa. In newly-born infants, the pulling which the cord has undergone, the ligature of this part and the use of unguents, give rise now and then to the development of minute vesicles and to slight excoriations, distinguished from those of true eczema by their short continuance.

6th. *Eczema of the insides of the thighs, prepuce, scrotum, verge of the anus, and lower end of the rectum in the male*.—These varieties of eczema are all very rare in early life; they are more frequently met with between the thirtieth and fortieth year than at any other age. The eczema may begin in any one of these regions, and then creep on to the others in succession, or else attack them all at the same time. The sleep is broken; tormented by incessant pruritus, the patients become restless and irascible; the vesicles either break or are violently torn at the moment of their formation, so that it is often impossible to find a single one untouched; the skin is bedewed with an ichorous fluid; the patients tear themselves with their nails; crevices are formed from which a sero-sanguinolent exudation takes place; the penis, scrotum and perineum are extensively excoriated; the lint and dressings applied to these parts are speedily soaked with discharge; walking, and the friction of the clothes, the heat of the bed, and occasionally the presence of pediculi, add to the amount of irritation, which is already excessive; erections, and the act of emptying the bladder and rectum, are often attended with pain. In the great majority of cases, this form of eczema becomes chronic. It proves at all times a protracted and obstinate disease, and one in which patients are willing and eager to submit to the most energetic treatment, in order to get rid of their misery; there are cases, however, in which this ought to be employed with great discretion. One of my patients, who had laboured under a chronic eczema of the margin of the anus for twenty years, became accidentally affected with a very severe inflammation of the gastric and pulmonary mucous membrane, which yielded to a rigid adherence to low diet, the use of asses' milk,



mucilaginous diluents, and the insertion of an issue. During the acute and most severe period of this disease, the eczema of the fundament disappeared completely, but broke out again after the cure of the gastro-pulmonary inflammation. This interchange of internal and external inflammations is well worthy of engaging the attention of the pathologist and therapist.

Eczema of the scrotum, perineum, &c., and especially the fissures it occasions in the skin, have occasionally been confounded with lichen *agrius* and syphilitic sores.

7th. *Eczema of the inner parts of the thighs, of the vulva, of the verge of the anus, and of the mucous membrane of the vagina and rectum in the female.*—Children are seldom attacked with eczema of these regions. In the adult female the disease may commence in any one of them and be propagated successively to the others; or it may seize on all of them at once. Like the disease in the male it begins with heat and intolerable itching; the vesicles burst as soon as formed; the pain becomes unbearable, excoriations take place, the disease spreads to the labia majora, to the mucous membrane of the vagina, to the verge of the anus and to the rectum. The scalding heat and pruritus are extremely violent; the passage of the urine is painful; a discharge of an offensive smell takes place from the external organs of generation. The vagina and inner surface of the labia present slight superficial excoriations; patients occasionally addict themselves to masturbation with a sort of fury as in prurigo *pudendi*; the sexual act is either impossible or exceedingly painful.

This variety of eczema has been sometimes taken for a syphilitic affection; and it is often difficult, when it is accompanied with a leucorrhœal discharge, to determine whether this flux be the cause or the effect of the vesicular eruption. Discharges from the vagina, however, give rise much more frequently to intertrigos than to true eczemas.

8th. *Eczema of the upper and lower extremities.*—Eczema of the forearm, of the arm and of the thigh present nothing peculiar; those of the legs, in elderly persons, have been described under the title of *tettery sores* (*dartres ulcereuses*). They usually begin in a chronic form, and are occasionally accompanied with varices of the veins and with ulcers. Eczema of the legs often presents the characters of eczema *rubrum*. The skin, of a livid hue, tense, not very hot, and sprinkled with numerous pores that pour out an ichorous reddish fluid, presents excoriations of a bright red, the surface of which is dotted over with points of a deeper shade of the same hue; other parts present yellowish laminated incrustations, fissures or extensive excoriations. The vesicles are very rarely to be seen entire. The eruption is occasionally propagated to the dorsal aspect of the feet, to the toes and the integuments between them, and then the same phenomena are observed as when the disease attacks the hands and fingers. Farther, it is requisite to distinguish a primary form of eczema followed by sores, from those vesicular eruptions that are produced by the contact of discharges from ulcers of an older date. The cure of these eczemas is accomplished with difficulty; and even when the excoriated places are healed up, when the serous exudation no longer takes place, and the fall of the scabs has been completed, an epidermic exfoliation and scaly state of the skin continue for a long period; the skin too retains a reddish, livid and shining appearance, and the slightest irritation brings back the disease in greater severity than it possessed even on the first invasion.

9th. *Eczema of the bend of the arm, of the axillæ and hams.*—These varieties, in their evolution and in their progress, have a great resemblance to those that appear about the margin of the anus and vicinity of the genital organs in either sex; they are, however, much less painful. Those of the axillæ are the most uncommon, and have frequently the appearance of the eczema *impetiginodes*. In these regions the heat is usually considerable; they are in an habitual state of moisture; the follicles are numerous, and the motion of the parts incessant: hence the violence of the pruritus, the copious discharge of serous fluids, and the occurrence of excoriations and chaps so difficult to cure. It is important to distinguish these varieties from confluent lichens.

10th. *Eczema of the hands.*—Eczema *simplex* occasionally appears between the fingers, on the backs of the hands and on the anterior parts of the wrists. I have seen the vesicles of this disease as large and as pointed as those of scabies, so that it was matter of difficulty

to distinguish between them. It is true that one of these affections is contagious and the other is not; but the experiment that must be made to establish this diversity of character cannot, of course, be recommended to be instituted on purpose. Eczema *rubrum* very frequently occurs on the backs of the hands and fingers; occasionally between the fingers and around the nails; the vesicles being extremely crowded in these cases may give rise to the formation of bullæ of various dimensions. When confined to the circumference of the nails, as I have several times seen the disease, it simulates onychia very closely; and when it gets chronic in its nature, the skin on the backs of the hands becomes covered with large thick scabs of a yellow or brown colour, and the spaces between the fingers present deep fissures, the bottoms of which are highly inflamed, whilst their edges are covered with laminated scabs. From these fissures a seropurulent fluid is continually exuding, especially when the parts are bent, or used in any way. When the hand is passed over the diseased surfaces, they appear as rugged as the bark of an aged oak. Long after the disease is to all appearance cured, the skin remains hard, dry and scaly, and is very liable to chap and split.

In general eczema, after several successive crops of eruption have been evolved, the inflammation occasionally spreads to the palms of the hands. The fluids effused are then detained under the thickened cuticle, and not shed upon the surface, a circumstance that modifies the appearance of the eruption notably.

Eczema of the nails will be described in another place. See Onychia.

350. *Complications.*—The numerous cases which I have watched myself through all their stages, prove that eczema may co-exist with the greater number of the diseases that attack the external integuments. Pustules of impetigo are very commonly seen in the middle or near vicinity of a district attacked with eczema; this is even the most natural, as it is the most frequent complication. I have seen eczema coincident with lepra. The vesicles were disseminated in the intervals between the scaly patches, and got well, whilst the leprosy continued unchanged; as if these different affections had severally depended on some peculiar and distinct condition of the system. I have seen a young woman labouring under very extensive psoriasis *guttata* and a moist eczema of the face and ears at the same time. I have observed eczema co-existing with scaly syphilitic affections. The bullæ of rupia, the pustules of ecthyma, and boils are occasionally observed in individuals labouring under chronic eczema of different districts of the body. Certain forms of eczema of the sexual organs and hairy scalp are attended with the production of pediculi, which incessantly excite the patients to scratch themselves. Eczema is occasionally observed to precede scabies; at other times it seems to be induced by the unguents employed in the treatment of this disease.

Among children, inflammatory affections of the mucous membranes frequently coincide, or alternate with the development of this eruption. When it is general, and the secretion is abundant and continues long, cough and diarrhœa are apt to supervene, especially among the aged, and individuals weakened or worn out by previous disease. I have seen eczema of the scalp, ears and face spread to the mucous membranes of the eyes, meatus auditorius and nostrils, causing intense ophthalmia, severe otitis, and chronic coryza followed by profuse and fetid discharges. Pregnancy may cause the development of eczema, and complicate or stand in the way of its proper treatment; occasionally, also, the disease has appeared in nurses, as a consequence of weaning. Among children it now and then appears on the mucous membrane of the mouth. Eczema of the legs in old people is rather frequently accompanied with the appearance of petechiæ around the inflamed parts of the skin, also with œdema, varicose tumours, and ulcers which protract or impede its cure. I have seldom seen eczema occur among the consumptive; on the other hand it frequently coincides with gastric, enteric and bronchial inflammations, especially among children, in whom it is often replaced by convulsions. The practical inferences to be deduced from these observations are, that the treatment of eczema is to be modified according to the ages and the idiosyncrasies of individuals, and above all, according to the nature and the intensity of its different complications.



351. *Alterations of structure.* The follicles of the skin are the parts essentially affected in eczema. And we observe, in fact, that if the disease may and does attack almost every district of the integuments, it shows itself in preference on the inside of the thigh, at the bend of the arm, in the hams, the axillæ, the groin, on the scrotum, labia, margin of the anus, and generally in those situations in which the follicles are the most largely developed, and the most numerous bestowed. The disease is very frequent in the scalp among children, and there, in early life, the follicles are very numerous and very large; in this situation, on the contrary, it is rarely met with among the aged. Farther, the disease seldom appears in districts where the existence of follicles is matter of doubt, as in the palms of the hands and soles of the feet, the neighbourhood of the patellæ and olecrana. And to conclude, in eczema *simplex* the affection of the follicles is evident to the eye. In eczema *simplex* the papillary body does not appear to be injected; it is so, however, in the variety entitled *rubrum*, in which the deep layers of the corion and the subcutaneous cellular tissue are also occasionally inflamed. When excoriated, the skin may become covered with pseudo-membranous deposits, analogous to those which are observed on blistered surfaces. I have even seen the skin of the leg, in old subjects labouring under eczema *rubrum*, presenting small holes which might have been filled with the head of a pin, and little sinuous ulcers, very irregular in their course, which did not interest the whole thickness of the corion; the skin had an appearance very similar to that which a piece of mahogany board worm-eaten on its surface might be supposed to present. In chronic impetiginous eczema I have noticed small nipple-like projections on the surface of the skin which were owing to a sort of elongation of the natural papillæ. The cuticle itself undergoes various alterations in this disease. In the chronic forms it is resolved into a kind of farinaceous dust, or is thrown off in little laminæ, the centres of which, of a yellowish-gray colour, are more adherent than their circumferences. In certain eczemas of the hands the cuticle becomes dry and falls off in large yellow scales which are thick in proportion as they have been infiltrated with diseased secretions. Lastly, the cuticle is entirely destroyed in certain cases, and the corion is either exposed or is covered by incrustations of various thicknesses. The fluid secreted by the diseased surfaces, serous, limpid and almost inodorous in one case, is turbid, yellowish or greenish, and more or less consistent in another; it has a faint and sickly smell in eczema *impetiginodes*, especially when pustules of impetigo occur mingled with the vesicles of the eczema. In drying, this secretion gives rise to the formation of scabs which have some resemblance to those of impetigo. When the inflammation runs high, it may implicate the bulbs of the hair and the matrix of the nails, and cause these appendages of the skin to be detached. In brief the primary seat of eczema is in the follicles of the skin; but other elements of this tissue are affected in eczema *rubrum* and *impetiginodes*. The papillæ, the entire thickness of the dermis, the subcutaneous cellular membrane and the lymphatic glands are occasionally affected one after the other: hence those small abscesses that form in children who are attacked with eczema of the head, and those painful inflammatory swellings of the glands which occasionally end in suppuration. Other diseases of the skin (acne, rosacea, mentagra, and impetigo), also affect, and, indeed, more evidently affect the follicles than eczema. There are consequently essential differences between the various diseases of the skin which must be sought for elsewhere than in the immediate affection of the several anatomical elements of which this tissue is composed.

352. *Causes.*—I have met with several cases of eczema that appeared exclusively during the period of uterine gestation, that yielded with this state, that returned in a second and third pregnancy, and got well immediately after delivery, although various plans of treatment had been vainly tried before this event. Among children the process of teething and the quality of the nurse's milk, among women the states of amenorrhœa and dysmenorrhœa frequently exert a notable influence upon the development of eczema.

Our inability in a multitude of cases to discover any evident, or even probable cause of the disease, often leads us forcibly to the conclusion that eczema is most generally evolved and kept up by some hidden alteration of the fluids and solids. In this disease, as in

almost all inflammatory affections, independent of external causes, the blood is buffy.

If a patient who has recovered from one attack of eczema is seized a second time, it is almost certain that the disease will be of the same genus and species as before. This speciality in the form, and probably in the nature of relapses, has been observed in pemphigus, in favus, and in several other diseases of the skin.

In infancy and youth, eczema appears more particularly on the head; in riper years on the breast and belly, but especially on the genital organs; and in advanced life, on the lower extremities and about the margin of the anus. According to Billard, eczema is also frequently observed on the trunk and extremities of the newly-born infant; he tells us he has seen the disease in infants scarcely a day old. M. Levain having delivered a woman labouring under impetiginous eczema of the whole body, observed that the child two days afterwards presented several clusters of vesicles on the left forearm, on the neck, and in the hams, and by and by eczema *rubrum* appeared on the forehead and hairy scalp. It is at the periods of the first and second dentition that children are more especially attacked with eczema. Women are more subject to the disease than men, particularly at the critical period of life. Chronic eczemas of the hairy scalp, ears, eyebrows, and eyelids, are common in scrofulous subjects. Eczema is not a contagious disease, but under certain circumstances, especially when the discharge is copious, the contact of the secretion may determine vesicular eruptions upon healthy parts. M. Levain has seen acute eczema of the labia in a woman whose husband had long laboured under a similar eruption of the scrotum; the woman in this case had a rapid recovery. I have collected several cases of the same kind.

Relapses are observed to happen in almost all diseases, but in none are they more frequent than in eczema. I have collected many instances of unlooked-for returns of the complaint in consequence of variations of atmospheric temperature, errors of diet, affections of the mind, &c. I have seen the disease get well and recur twelve or fourteen times within the space of a few months, in despite of the most scrupulous and undeviating attention to regimen. These relapses happen particularly among individuals of an irritable and nervous constitution.

353. *Diagnosis.*—Eczema is of all the diseases of the skin that which presents the greatest variety in its appearance, for as it is acute or chronic, simple and unmixed, or complicated with pustules, it may be characterized by vesicles with or without redness, by moist or running excoriations, by laminated incrustations, or by small furfureaceous scales.

Willan and Bateman have both connected to the group of eczemas several artificial or accidental vesicular eruptions, which both in their nature and means of cure are totally distinct. Such is the *sun-fret* (eczema *solare* of these authors), which is observed among labourers in the time of harvest, and the inhabitants of towns who flock into the country during the fine season of the year. The skin of the face, neck, hands, and other parts usually left uncovered, is attacked with erythema, to which succeeds a plentiful eruption of vesicles, analogous indeed in appearance to those of eczema, but speedily ending in a slight furfureaceous desquamation of the cuticle.

Some preparations of mercury excite a vesicular eruption which has been connected with eczema, and which resembles this disease considerably in its external characters; but in its nature and progress it bears a much nearer affinity to inflammations artificially produced.<sup>1</sup> Various other substances, such as Burgundy pitch, adhesive strap, plasters of cicuta and opium, the juices of certain plants of the family of euphorbiaceæ, the oil of the croton tiglium, sulphureous lotions, diluted acids, &c., have also the property of causing minute vesicles to be developed on the skin, which in their form, arrangement and size approach more or less nearly to the eczemas. All these vesicular inflammations, however, differ essentially from this group in their nature, and get well with an ease and a rapidity that make a strong contrast with the inveteracy and tendency to return of eczema.

The vesicles of herpes are globular, and arranged in clusters surrounded by an inflammatory areola, of much greater extent than that

<sup>1</sup> Vide sub. Hydrargyria.



of eczema. The minute serous vesicles that are occasionally observed along with rheumatic affections, puerperal peritonitis, the furuncular disease of the bowels (dothineritis), &c., are devoid of inflammatory characters, and are very different from the vesicles of eczema.<sup>1</sup>

When eczema *simplex* appears between the fingers, on the wrists, bends of the arms, hams, and fore parts of the belly, it is at times difficult to distinguish it from scabies: it was a mistake to say that the vesicles of eczema were always flat and agglomerated. I have seen them as large as those of scabies, dispersed and separate like them, and like them, too, a little pointed: but scabies is essentially contagious, eczema is not; this is almost always acute, that as constantly chronic in its nature; the pruritus of eczema is accompanied with a kind of smarting, that of scabies is rather a pleasant than a painful sensation.<sup>2</sup> The small, red, solid and itchy papulæ of lichen do not contain any serum like the vesicles of eczema *simplex*. In confluent and inflamed lichen (lichen *agrius*, Willan), when the papulæ, crowded together in large patches have been torn by the nails, the skin, in a raw and bleeding state, pours out a sero-sanguinolent fluid which, in drying, assumes an appearance intermediate between squamæ and scabs, that might readily cause the disease to be mistaken for eczema *rubrum*. This advanced and very severe form of lichen has consequently been approximated by M. Alibert to the excoriations of eczema, and mixed up with his description of the *Dartre squameuse humide*. The small psudaceous pustules of impetigo, from their very first appearance, contain a thick, greenish-yellow fluid. Eczema *impetiginodes* in its commencement either presents transparent vesicles which become rapidly purulent, or, more rarely, a mixture of the proper vesicles of eczema and of the pustules of impetigo. The scabs of eczema *impetiginodes* are not so thick, but drier, and more compact than those that follow the rupture of the pustules of impetigo, the scabs of which are of a greenish-yellow colour, rough and uneven aspect, and not very unlike the masses of gum that concrete upon the cherry-tree. Eczema of the labia and vagina causes a discharge that might be mistaken for a gonorrhœa; it is rare, however, that a few untouched vesicles may not be discovered in the neighbourhood of the affected parts to serve as guides in the diagnosis. (a)

(a) The following contrasted characters, given by Mr. Phillips, (*Lect. on Surgery, Med. Gaz.*, 1840,) will aid the student in the diagnosis of eczema: "As you see, it would not be difficult to mistake these affections for scabies. Like it they are often developed without inflammation—like it they often affect the wrists and sides of the fingers—like it, they produce great itching; but, then, the vesicles of eczema are flat, those of scabies are conical-acuminate: those of eczema are agglomerated, those of scabies are distinct and isolated. The itching of eczema is stinging, that of scabies is rather an agreeable sensation. Scabies is essentially contagious; eczema is either not at all, or very little so. Eczema *rubrum* sometimes bears a resemblance to miliaria; but, then, in miliaria the vesicles are never confluent—they are larger, and there is more general excitement. The eczema *impetiginodes* can scarcely be mistaken for impetigo: the surface occupied is usually large. Impetigo pustules never, at their commencement, contain a transparent serum; they have a large base, and a thicker fluid. Eczema is, at first, always vesicular, and never contains true pus, but a yellowish sero-purulent fluid. Then, impetigo produces true thick scabs, yellowish and rugous; in eczema we see only thin squamæ. When the disease is chronic, it may be confounded with lichen. For instance, here is lichen *agrius*; it is accompanied by an exhalation of serum, followed by scales; but they are larger, thicker, yellower, than those of eczema. More like scabs, they do not leave after them a red, smooth, shining, or slightly excoriated surface, but a surface chagrined by small prominent points—papulæ; and, then, in lichen we can always find some papulæ, where eczema would present vesicles. However, where it occupies the hands, much attention is sometimes necessary. Again, it may be confounded with psoriasis. Here, again, the surrounding vesicles will be wanting. There may be no weeping; and, after the scales

The absence of pruritus in syphilitic affections distinguishes these sufficiently from the eczemas of the sexual organs, in which the itching is almost insufferable. It is occasionally difficult to discriminate between chronic eczemas grown scaly, and old lichens and prurigos, situated on the genital organs. Lorry appears to me, indeed, to have confounded these three obstinate forms of cutaneous affection in his description of *prurigo pudendi*; nevertheless, before falling into the chronic state, eczema of the genital organs is attended with a copious exudation which is never observed in the other diseases just mentioned. Eczema of the scalp in the state of desquamation is not always easily distinguished from psoriasis and pityriasis *capitis*; it is, however, seldom that no remains of yellowish incrustations and scabs, characteristic of this disease, are to be seen on any part of the scalp, or ears, or person at large, a circumstance never observed in pityriasis, a disease essentially furfuraceous and one that is never accompanied with a discharge.

354. *Prognosis*.—In children eczema of the scalp and face is often a salutary eruption. When it appears during the process of teething, it will hardly yield to treatment until the teeth have appeared. In young women whose menstrual function is irregular, eczema of the ears and scalp is an intractable malady, and seldom gives way before some favourable change is effected in the state of the general health. The disease is always subdued with difficulty in women arrived at the critical period of life; and when it appears during pregnancy it can rarely be subdued until after delivery. When eczema is hereditary the cure of the disease is very frequently followed by a relapse. Eczema of the hands among cooks, hat-makers, dyers, &c., is always difficult of cure. In elderly persons eczema of the legs, attended with œdema, and a varicose state of the veins, is often altogether incurable.

exfoliate, instead of a smooth, red, elevated surface, as is seen in psoriasis, we find a cracked one."

And again: "You have found a vesicle; the disease is vesicular; it must be, then, herpes or eczema: your first idea would be eczema, because for every single example of herpes, you will see from twenty to thirty cases of eczema. Herpes circinnatus is a circle, or, as it has been termed, a "ringworm"—eczema never so. Herpes only affects one or more points: eczema often the whole scalp; add to these the differential characters I formerly pointed out, and you can have no difficulty in making out the vesicular diseases which affect the scalp."

Of eczema *impetiginodes*, Dr. Carswell (*Clinical Lectures, Lancet* 1839), thus speaks: "And, in the first place, what are the elementary characters of eczema *impetiginodes*? This disease, as the term implies, is a compound of two diseases,—of eczema and of impetigo. Now, each of these, in its separate state, has its own elementary character—a vesicle in eczema, and a pustule in impetigo. In eczema *impetiginodes* we have both the vesicle and the pustule; the vesicle, however, being the primary element, and generally predominating during the early stage of the disease. And, besides, the pustular character of this affection always succeeds to the vesicular, and can easily be traced during its progress to a change in the contents of the vesicle, which consisting, at first, of a clear yellow-coloured serosity, afterwards becomes milky-looking, opaque, and puriform. In most cases, however, of eczema *impetiginodes* the pustular element is much less perfect than the vesicular, the contents of the former consisting of a sero-purulent rather than of a purulent fluid. But in cases in which the inflammation is more severe than usual, the perfect impetiginous pustule is formed; that is to say, the small, psudaceous pustule, characteristic of impetigo, and even the large or phylaceous pustule, characteristic of ecthyma.

"Such are the special and distinctive characters of eczema *impetiginodes*. The pustular character of this form of eczema distinguishes it from the other forms of the disease, viz., from the eczema *simplex*, which is a purely vesicular eruption, neither preceded nor accompanied by redness of the skin; and from eczema *rubrum*, which is always distinguishable by the bright red colour of the skin, and the number of minute vesicles by which it is covered. To distinguish eczema *impetiginodes* from some other diseases of the skin is not always so easily accomplished, and this is more especially the case in that form of scabies, called scabies purulenta, affecting the fingers and hands, parts, also, often affected with eczema *impetiginodes*."

<sup>1</sup> Vide sub. Sudamina.

<sup>2</sup> James the First of England and Sixth of Scotland, held that kings alone were worthy to have the itch, the pleasure of scratching was so supreme.—R. W.



Eczema resists curative means so much the more obstinately as it occupies a more extensive surface, as it is of older date, of a severer kind, and as it appears on the lower extremities or on the hairy scalp. When children and the aged are the subjects of eczema, it often proves a disease *which it is dangerous to cure*.

355. *Treatment*.—In calling to mind the influence which teething, amenorrhœa, dysmenorrhœa and pregnancy exercise on the production of certain eczemas, we are naturally led to the indications of cure. Some varieties of the disease get well in time under the influence of a regulated diet; others require means of greater potency; and there are a few which are either intractable, or which it would be dangerous to interfere with.

A considerable number of cures attributed to the use of medicines of little power, ought to be almost entirely ascribed to the influence of *regimen, rest and time*, which are frequently very powerful, especially among the poorer classes leading laborious lives, who are mostly admitted as patients into public hospitals.

I have seen children at the breast attacked with eczema of the hairy scalp who recovered by changing the nurse. I have seen many persons of mature years labouring under chronic eczema of the scrotum, verge of the anus and other parts, whose malady was constantly aggravated by the slightest irregularity in point of diet. It would be idle to ascribe too great an influence to the farrago of *cooling and cleansing* decoctions and drinks so constantly recommended in cutaneous affections, and especially in eczema; but, on the other hand, it is perhaps not going too far to affirm that, of late, these means, or rather the dietetic plans of which they formed a part, have been too much neglected. In no case, however, would it be reasonable to restrict individuals, otherwise in perfect health, to a lowering system of diet; their constitution might suffer from such a course.

I have met with several cases of eczema in which a vast variety of therapeutic agents had been fruitlessly employed, whilst the patients went on with their usual avocations, and took active exercise, but which were successfully attacked by the same remedies, from the moment that these individuals consented to *lay themselves up*. *Time* also modifies eczema at length, and occasionally accomplishes its cure; so that individuals labouring under the disease in a chronic form, have now and then got well without recurring to any medical treatment whatever.

The simple or emollient cold or tepid bath is frequently of the greatest service in the different acute species of eczema, even when the affected parts are not immersed in the water. In the decline of these diseases, when stiffness and dryness of the skin are alone complained of, and in the chronic eczematous affections of the backs of the hands, fingers, &c., the vapour bath, and, better still, the steam douche to these parts is found to be useful. When eczema has passed into the squamous state, the warm sea, and alkaline bath are efficient in freeing the skin from the layers of epidermis accumulated on its surface; but they almost always increase the redness, and the squamæ are rapidly reproduced. Local baths repeated several times a day, and fomentations of decoction of linseed, marshmallow flowers, poppy-heads, and milk, are often of advantage in eczema of the genital organs; in these cases the tepid hip-bath twice every day, always gives the greatest relief. If the disease have extended to the mucous membrane of the vulva, injections of althea-root decoction, with or without the addition of a little acetate of lead, are generally found to be soothing. Sulphureous baths have also been tried in the advanced stages of eczema, especially when the aged and enfeebled were the subjects of the disease. These occasionally cause new eruptions, and have been found effectual in restoring eczema, the disappearance of which, either spontaneously or obtained by art, has been followed by unpleasant or serious symptoms. The waters of the baths of Louÿsche have been frequently recommended with effect for this purpose. They have also occasionally seemed to make old standing eczemas run their course more rapidly, and thus to hasten their cure. I have seldom found artificial sulphureous baths produce such good effects, except in the chronic eczemas of elderly people, and some middle-aged persons, when they now and then seemed to lessen the redness and discharge from the skin, after having exasperated these morbid states for a time; scrofulous subjects alone received invariable advantage from the use of these baths. I have occasionally seen beneficial effects

from the use of a sulphureo-alkaline ointment. Sulphur exhibited internally has never seemed to me to exert any appreciable influence on chronic eczema, except when it acted as a purgative.

In running eczemas of small extent, emollient fomentations have been found of service. When the disease is followed by painful and extensive excoriations, and the skin is red and swollen, or covered by yellowish-looking scabs of considerable thickness, soothing-washes must be replaced by poultices of floury potatoes, of ground rice, and of crumb of bread, softened still farther with decoctions of althea and poppy-heads. These cataplasms are greatly preferable to such as are prepared of linseed meal, which are observed occasionally to induce artificial vesicular and even pustular eruptions. When the parts of the skin affected are covered with hair, these various topical applications must be used folded up in a fine muslin rag.

When poultices are employed in the treatment of children labouring under eczema of the hairy scalp and of the face, care must be taken to keep the head well covered, especially during the first few days, a precaution without which otitis and ophthalmia of greater or less severity are extremely apt to supervene. *Depilation* is an absurd and cruel practice during the acute period of eczema of the hairy scalp; neither is it ever to be recommended even when the inflammation has passed into the chronic state.

Moderate *compression* by means of a roller properly applied, is often employed with advantage in the cases of elderly persons affected with eczema *rubrum* of the lower extremities, when the disease is complicated with œdema or a varicose state of the veins, or when patients are obliged habitually to keep the erect posture without much motion.

Slight *escharotics*, solutions of the *nitrate of silver*, *diluted muriatic acid*, &c., have been recommended with a view to change the actions of the skin, when eczema has passed into the scaly state, and has continued for several months or years. With like intentions ointments of the *red precipitate*, of the lesser *celandine*, *clematis*, *spurge*, &c., and even *blisters* have been applied to the whole of the affected surface of the skin. If the cure of circumscribed chronic eczemas have occasionally been obtained by such means, these diseases have also been frequently and seriously aggravated by them. In general, when eczema has passed into the squamous or furfuraceous state, *soothing* ointments are the best local applications; the good effects of the ointments of oxide of zinc, and of the protochloride of mercury are certainly due in great part to the hog's-lard with which these substances are then largely incorporated.

M. Alibert has given the details of a case in which the disappearance of an eczematous eruption (*dartre squameuse*) was followed by insanity. I am in the habit of employing issues in obstinate eczema of the hairy scalp, and genital organs; and when we have succeeded in bringing about or are anxious to accomplish the cure of the eczemas of elderly persons, which have existed long, or of individuals who have previously suffered from a chronic affection of the viscera, it is advisable to institute and keep open an issue or a blister in one of the arms. If the theory of counter-irritation still requires clearing up, it is enough that by the practice we can relieve the mind of the patient especially, from doubts and fears, and therefore it ought not to be neglected.

I have said that eczema of the scalp, face and ears was occasionally a salutary disease in childhood. It is therefore proper to inquire in the first instance whether it might not be dangerous to attempt its cure; the best and safest termination being that which is accomplished naturally. Facts enough prove the danger of discussing these eruptions. On the other hand, inflammatory affections of the eyes, ears and viscera have been seen to disappear on the eruption of certain eczemas; in such cases it would be improper to attempt the cure of the cutaneous affection in any other than the slowest and most gradual manner. These remarks also apply to other ages, when the disease appears under similar circumstances.

The *vegetable acids*, diluted with water; sherbets of the *sulphuric* and *muriatic acid*, with or without the addition of gum; or milk mixed with barley-water or gruel, for those individuals with whom acid drinks do not agree, are usually recommended in the treatment of acute eczema. Such means are of less avail when the disease is chronic in its nature. When eczema is acute, and the pruritus is exceedingly troublesome, and the inflammation runs high, as in the



eczema rubrum or *impetiginodes*, it may be necessary to abstract blood once or oftener. I have had occasion to prove the utility of bleeding in a great number of cases, even of chronic eczema. When one bleeding has been followed by a notable improvement in the symptoms, it is commonly an inducement to repeat the operation after a few days have elapsed. I frequently make such experimental bleedings in the treatment of diseases of the skin. Cases of eczema, however, frequently occur, which resist this powerful means, or which even continue to advance in spite of its employment. It is, therefore, difficult to lay down precise rules for the management of every case, or to specify those in which blood-letting will be found serviceable or detrimental. It is almost always hurtful to individuals of an irritable constitution and spare habit, and in whom the cutaneous affection has supervened or been increased after some violent affection of the nervous system. Hereditary eczema is usually a very obstinate complaint, and we must beware of persisting in endeavours to effect its cure by means of blood-letting. In adults and individuals of mature years, the *general* is constantly to be preferred to the *local* abstraction of blood. The last is the only form of blood-letting that can be practised in regard to young children. In eczema of the face and scalp, of the pudenda and margin of the anus, a number of leeches are often applied with good effect in the neighbourhood of the affected parts. The aged bear bleeding badly; yet the measure occasionally becomes necessary when the parts implicated are severely excoriated and discharge abundantly, and when the disease is accompanied with violent pain and sleepless nights.

In chronic forms of eczema, especially affecting the scalp and face, the waters of Seidlitz and Balaruc, the sulphates of soda and magnesia, or the tartrate of potash administered so as to procure one or two liquid evacuations daily without inducing colic, or even exhibited in cathartic doses twice a week during two or three months, are found to be useful when they only cause a temporary state of irritation in the digestive passages, without exerting any lasting ill effect on the state of the general health. The use of these remedies must be immediately suspended when pain, a continual feeling of uneasiness, and febrile symptoms give us reason to fear the excitement of inflammation in the stomach or alimentary canal.

Purgatives are constantly had recourse to in the treatment of the eczemas of childhood. They are injurious to women who are pregnant or nursing. Individuals of a nervous temperament, and habitually confined in their bowels, always derive benefit from this class of medicines. Calomel alone, or in combination with jalap, is a good form of purgative; when prescribed in frequent small doses, however, its use is almost constantly followed by painful inflammation of the mouth. Eczema, in some of its forms, is so painful a disease, and causes such distressing insomnia, that recourse must often be had to medicines of a narcotic character.

Carrère and Bertrand-Lagrésie have greatly extolled the effects of the dulcamara in the treatment of eczema. The expressed juice, the decoction and the extract of this plant were prescribed by both of these practitioners, combined with purgatives, particularly a compound of the blue pill, with aloes, scammony and aromatics. After having fruitlessly tried the dietetic, the antiphlogistic and purgative plans of treatment in obstinate cases of eczema, about the verge of the anus and the genital organs, I have occasionally made successful use of the decoction of bitter-sweet, with the addition of a quarter of a grain of sublimate to each dose; but this practice has its dangers, or at all events its inconveniences, even when it is not pushed to extremes.

The preparations of arsenic are occasionally the only medicines which can be successfully administered in chronic and rebellious eczema of the scrotum, pudenda, verge of the anus, &c. I shall not repeat what I have already said, 188-192, of the *modus agendi* of this class of remedies, and of the precautions which are necessary to be observed in their administration. I shall only farther add, that the best advice which can often be given to patients advanced in life and of infirm constitution, is not to attempt the radical cure of such an infirmity as chronic eczema, if the disease be at all endurable. The removal of these natural drains of the system is often followed by serious symptoms of a different kind; or, if no ill consequence ensues, the cure seldom proves permanent, the disease generally

returning within a few months after the use of active medicine has been abandoned. (a)

#### *Historical Notices and particular Cases of the Disease.*

356. According to Ætius,<sup>1</sup> the Greeks characterized, under the name of *eczema*, those itchy vesicles that were not followed by ulceration. In later times Willan<sup>2</sup> restored the term, using it to designate a vesicular non-contagious eruption, various forms and different terminations of which had been improperly described as particular diseases under what were deemed appropriate titles.

Several cases of *eczema simplex* have been detailed under the names of *rubores cum vesiculis et pruritu*.<sup>3</sup>

An immense number of cases of *eczema rubrum*, *impetiginodes* and *fluens*, have been recorded by French pathological writers under the titles of *dartre vive*,<sup>4</sup> *dartre squameuse humide*,<sup>5</sup> *herpes fongueux*,<sup>6</sup> *dartre avec ampoules ou vesicules*,<sup>7</sup> and we must even arrange several descriptions of *scabies fera*,<sup>8</sup> and of *agria* under the single head of *eczema*.

Several cases of *eczemata* in their last and *furfuraceous* stage, have been described under the names of *dartre furfuracée*, and others under those of *dartre érysipélateuse* (*eczema rubrum*) and *milky eruption* (*eczema simplex*),<sup>9</sup> terms which correspond to the *running scall*, *humid tetter*, &c., of English writers.

*Eczemata* of the face and hairy scalp, in their acute states, have been described as *crusta lactea*,<sup>10</sup> *tinea mucosa*,<sup>11</sup> *porrigo larvalis*,<sup>12</sup> *scabies faciei*,<sup>13</sup> and *itch of the face and head of young children*:<sup>14</sup> the *scurfy* state and *asbestos* appearance of the dermis which this disease occasionally present in its last stage, have been described under the titles of *tinea furfuracea*,<sup>15</sup> and *tinea amiantacea*,<sup>16</sup> (*teigne furfuracée*, *teigne amiantacée*.)

Of late several cases of *eczema* have been published in different periodical publications.<sup>17</sup>

In the same works, also, may be found cases and remarks illustrative of the efficacy of the ointment of cantharides in restoring *eczematous* eruptions which had disappeared, and had been followed by ill effects, on the virtues of the *cicuta*,<sup>18</sup> on the inconveniences of oiled silk coverings in *eczemata* of the hairy scalp,<sup>19</sup> on the properties of the *diachylon gum plaster*,<sup>20</sup> of the *dulcamara*,<sup>21</sup> of *emollients*, and

(a) See, in a subsequent note, cases illustrative of the value of the arsenical treatment. In some of the more obstinate cases of chronic eczema, recourse may advantageously be had to Donovan's solution of the iodide of arsenic and mercury, in a dose of five drops gradually increased.

<sup>1</sup> Εσκήματα ab ebulliente fervore, Græci vulgo appellant. Tetrabib. iv. sermo i., cap. 128.

<sup>2</sup> Batem. Synopsis. Art. Eczema.

<sup>3</sup> Schenck. Obs. medic. rar., etc., fol. p. 749.

<sup>4</sup> Bertrand-Lagrésie. Essai sur le trait. des dartres (Obs. i. iv. v. vi. vii. x. xix. etc.).

<sup>5</sup> Alibert. Précis sur les maladies de la peau, 2 vol. 8vo. t. i. p. 224.—Deleau. Ann. de la méd. physiol., t. vii. p. 271.

<sup>6</sup> Rasori. Rec. périod. de la soc. de méd., t. ix. p. 367.

<sup>7</sup> Bertrand-Lagrésie. Op. cit. (Obs. iii.)

<sup>8</sup> Plater. (F.). Praxeos, t. ii. p. 672.

<sup>9</sup> Puzos. Traité des accouchemens, 4to. 376.

<sup>10</sup> Fischer. De morb. cutan. spec. i. Gœtting., 1785 (*crusta lactea adultorum*).—Wolff. Diss. de crusta lactea. Jenæ, 1793.

<sup>11</sup> Alibert. Op. cit. p. 35.

<sup>12</sup> Willan. On cutan. diseases, 4to. Art. Porrigo.

<sup>13</sup> Rec. des actes de la soc. de santé de Lyon, t. i. p. 331.

<sup>14</sup> Mauriceau. Traité des maladies des femmes grosses, etc., 4to. Paris, 1740, t. i. p. 510.

<sup>15</sup> Alibert. Op. cit. Obs. iv. p. 25.

<sup>16</sup> Alibert. Op. cit. Obs. ii. p. 31.

<sup>17</sup> Journ. hebdom., t. iv. pp. 77, 78;—t. viii. p. 44.—Revue méd., Juin, 1830, p. 343.—Journ. complém., t. xiii. et xxxvi. p. 85.—*Ibid.*, t. xxxix. p. 37.—Lanc. franç., t. v. p. 58, 1831.

<sup>18</sup> Labonardiére. Rec. périod. de la soc. de méd., t. i. p. 263.

<sup>19</sup> Lespine. Rec. périod. de la soc. de méd., t. xxxviii. p. 437.

<sup>20</sup> Labonardiére. Rec. périod. de la soc. de méd., t. i. p. 261.—Rec. pér. de la soc. de méd., t. lviii. p. 292.

<sup>21</sup> See the observations of Carrère, Crichton, &c., quoted § 202.



of *blood-letting*,<sup>1</sup> of the *white precipitate*,<sup>2</sup> of the *rhus radicans*,<sup>3</sup> of *lotions of sublimate*,<sup>4</sup> of the *sulphuret of potash*,<sup>5</sup> &c.

Poupart has given us several cases of recovery from affections, which he characterizes as *dartres vives* (eczema rubrum), which were followed by serious consequences of various kinds.<sup>6</sup>

The Essay of M. Levain, on the subject of the *eczemata*, is also deserving of a perusal.<sup>7</sup>

Confusion in the language employed, and in the arrangement of the facts observed, so conspicuous, has arisen not only from the discrepancies of our medical nomenclature, but also in some degree from the error into which the greater number of pathologists have fallen, of considering as distinct diseases the degrees and even the different terminations of eczema, the various modifications and successive transformations of which they had not studied with sufficient care. I regret that the nature of this work will not allow me to give a great number of particular cases of a disease the external phenomena of which are so varied, and whose treatment so frequently presents such insurmountable difficulties.

CASE XLIV.—*Chronic eczema of the right breast, cured by Seidlitz water and an alkaline liniment.* A young woman of a sanguine and lymphatic temperament had laboured under a chronic affection of the skin of the right breast for three months. Instead of being soft and pliant as in the natural state, the mucous covering of the nipple, and the neighbouring skin were covered over a space three inches in diameter, with grayish or yellowish epidermic laminae. Those towards the centre of the nipple were thicker than those in its circumference. The squamæ were furrowed with many superficial chaps, from which a reddish-coloured serous fluid exuded. No vesicles were to be discovered; these had all been destroyed. The patient stated that during the first stage of her disease the parts affected had poured out great quantities of *red water*. The nipple was the seat of rather violent pruritus, which became intolerable during the periods of menstruation. I recommended her to be purged once a week with a bottle of Seidlitz water, and the diseased surfaces to be anointed gently three or four times every day with a liniment composed of two parts of olive oil and one of lime-water, the quantity of the latter to be subsequently increased till it equaled that of the oil. The pruritus was notably lessened by a few applications of this mixture. After the fifteenth day of treatment it had entirely subsided, and within six weeks the cure was complete.

CASE XLV.—*Chronic eczema of both mammae; cure accomplished by the use of the ointment of red precipitate.* Mademoiselle N \* \* \*, nineteen years of age, of a sanguine temperament, applied at the fourth Parisian Dispensary, 21st November, 1825. Up to the beginning of this year the patient had enjoyed good health. At this period, however, she was attacked, without assignable cause, with eczema of the nipple of the right breast, and two months afterwards with the same affection of the corresponding part of the left breast. An abundance of reddish or yellowish-coloured serum flowed from the parts in the first instance; the local disease was unconnected with the slightest apparent derangement of the functions generally. For these complaints the patient had had recourse to a variety of remedies, general and topical, without deriving permanent relief from any one of them.

November 21st, 1825.—There is now no vesicle to be distinguished on the surface of the parts affected. The mucous covering of the nipples is entirely but unequally inflamed, and presents a number of small excoriations in the form of scratches and linear chaps. The epithelium is even destroyed in several places, which are of a very bright red colour, moist, and covered with minute points of blood. In several others it is thickened, and somewhat reddish: towards the circumference it is whitish and thinner. The surface of the nipple, in fine, bears a great resemblance to a blistered surface beginning to dry up which has been scratched, or, rather, the disease is in that state which has been so frequently designated under the title of *scaly*

tetter or *dartre squameuse* by the writers both of France and England. The surface of the nipple instead of being smooth and soft, is rough and uneven to the touch. The pruritus is at times unbearable; frequently, when the patient has successfully resisted the strong desire to scratch the affected parts through the day, during the night when half asleep, she tears the nipples with her nails. The inflammation is evidently superficial and does not extend to the subcutaneous cellular membrane. (*Diluted sulphuric acid, warm bath, Goulard's wash.*) These remedies were tried for a month without other advantage than a slight diminution in the inflammation. The acid was first omitted, and then discontinued from its having caused colicky pains of the bowels. The nipples continued squamous as before, discharging one day and becoming hard and dry the next. I now advised gentle frictions night and morning with the ointment of the red precipitate of mercury, to be discontinued should the nipples become very much irritated, and resumed when the state of excitement passed off. This plan was soon followed by the alleviation of the pruritus, the disappearance of the discharge, and the formation of a new epithelium, smooth and uniform as it is in a state of health. A relapse, however, occurred without any evident cause, and recourse was again had to the red precipitate salve. At length, after the cure had been apparently accomplished several times, and relapses, successively, however, of less severity, had happened as often, the eczema was finally and completely cured towards the latter end of March. The patient was kept on the books till the 4th of May, 1826, in order to be certain that no new relapse occurred.

CASE XLVI.—*Chronic eczema rubrum and impetiginodes of the left hand. Venesection, sublimate and dulcamara.* N \* \* \*, a straw-hat maker, thirty-six years of age, of a lymphatic constitution, consulted me in the month of February, 1822, on account of an impetiginous eczema of the left hand. The disease had appeared about three months previously, and in despite of a variety of remedial measures, had been growing continually worse. When I saw the patient first, the dorsum and metacarpal region of the left hand were painful, red, excoriated and pouring out abundantly from a great many places a viscid and very fetid ichor, so that dressings were speedily soaked and subsequently stiffened by the drying of the discharge. The patient had been obliged to discontinue her usual occupation five weeks back. Towards the circumference of the excoriation several small yellowish scabs, and a number of red patches appeared within the last few days, upon which a great many minute transparent vesicles were observed. Next day the majority of these vesicles were as large as pins' heads, and the fluid they contained was opaque and milky. Several small psudracious pustules, slightly prominent, and a few small transparent vesicles were thrown out on the sides of the fingers, the divisions between which were inflamed, excoriated and painfully chapped. The whole of these parts were affected with an intolerable pruritus, and the patient, in spite of herself, scratched them every instant. The patient's general health was good; the menstrual periods were regular. (*Venes. ad 3viii. Fomentations with decoction of bran, cataplasm of rice flour; a quarter of a grain of sublimate in a cup of milk every morning fasting; three glasses of the decoction of dulcamara daily, the tepid bath every fourth day.*) These measures were speedily followed by a decrease of the inflammation and of the morbid secretion which accompanied it; I was even tempted to think the cure at hand towards the end of the third week; the skin of the back of the hand was whitish and covered with squamæ, but it was without redness, chaps or discharge, and no new eruption either of vesicles or pustules had appeared upon the fingers. On a sudden, however, an eruption of vesicles took place over the same parts that had already been affected, accompanied during the first few days with a copious exudation and intolerable pruritus. The same plan of treatment was still pursued without apparent injury to the digestive organs; the new eruption ran through the periods more rapidly than the first; and by the 25th of March, 1822, the patient had completely recovered; nor has she had any relapse since this period.

CASE XLVII.—*Chronic eczema of both legs.* Madame \* \* \*, thirty-eight years of age, of a mixed sanguineous and nervous temperament, had never been particularly indisposed until she was attacked, without any assignable cause, with eczema of both her legs in the month

<sup>1</sup> Bobillier. Rec. pér. de la soc. de méd., 2e série, t. xxxi, p. 135.

<sup>2</sup> Vacquière. Journ. compl., t. xxxi, p. 257.

<sup>3</sup> See the remarks of Dufrénoy, quoted § 207.

<sup>4</sup> Vincenzo Compagnero. (Gaz. méd., 1831, p. 433.)

<sup>5</sup> Bertrand. (Rec. pér. de la soc. de méd., t. xlviii, p. 369.)

<sup>6</sup> Traité des dartres, 12mo. p. 86. Paris, 1784.—Des maladies internes que les vices dartreux produisent.

<sup>7</sup> Levain (J.). Essai sur l'eczema, Paris, 1830.



of March, 1822. After a violent sensation of smarting, tingling, and pruritus, a large red patch appeared on the outer part of the left leg, upon which with the naked eye, and better, with the aid of the magnifier, an innumerable quantity of minute vesicles were observed. On the following days several new spots, also covered with vesicles, made their appearance on the inner part of the leg, from the whole of which before long a yellowish and glutinous serum began to be discharged by an infinity of minute pores, in such abundance that every thing put about the limb was speedily saturated. The motions of the limb were performed with difficulty and pain, and the diseased surfaces were affected with pruritus of the most intolerable description. The right leg also became affected, but the vesicles here were much fewer in number, and the parts on which they were thrown out, inflamed in a much inferior degree. The general health of the patient was not deranged in the slightest degree. (*Venes. ad 3xii. ; the warm bath ; whey for drink.*) The legs were dressed with saturnine cerate spread on a perforated rag, with compresses of soft lint to absorb the discharge. These dressings and the medical treatment gave relief, so much the more remarkable as Madame \* \* \* had hitherto done nothing but apply fine linen and tissue paper to the inflamed skin, and the violence necessarily employed in changing these simple dressings had caused painful excoriations, from which drops of blood distilled every time they were renewed. The same plan of treatment was continued for two months, the disease at one time getting nearly well, at another becoming exasperated by the development of fresh crops of vesicles. The disease continued in this state for five months, the patient all the while leading the most regular life, and having used the warm-bath more than one hundred times, when at length it disappeared to return no more.

CASE XLVIII.—*Chronic eczema of the verge of the anus and of the scrotum ; psoriasis palmaris and plantaris ; various plans of treatment fruitlessly pursued ; cure obtained by arsenical preparations.* So long ago as the year 1805, N \* \* \* suffered from extreme itchiness of the inner parts of the thighs. In 1810 the disease had spread to the immediate vicinity of the anus, and surrounding parts of the buttocks. The lower part of the intestine at length became the seat of intolerable pruritus which occasioned the patient the greatest distress on going to stool. From the year 1822 the parts mentioned had the appearance of a kind of large open blister ; and the patient was compelled to go about with an abundance of lint between the buttocks, to absorb the scalding serum which was discharged from the inflamed surface of the skin. In 1824, the patient was attacked with large pustules on the arms similar to those of ecthyma, which only got well slowly and reluctantly. Towards the end of the same year, the scrotum became implicated in the first affection, and caused such excessive pruritus that the patient was continually tearing his skin with his nails ; a serous, yellow-coloured discharge exuded from an infinity of minute pores on the inflamed surface, upon which I was never able to detect any vesicles ; but the progress and the seat of the disease, as well as the copiousness of the discharge, induced me to regard this *scaly running tetter, this dartre squameuse humide*, rather as a chronic eczematous affection than as a lichen agrius, a presumption that was greatly strengthened by the existence of several small vesicles, similar to those of eczema on the inner and upper parts of the thighs. In addition to the chronic eczema, the patient was also attacked with psoriasis of the palms of the hands and soles of the feet. This new affection first appeared on the right hand between the thumb and forefinger, then on the palm of the left hand, and lastly on the soles of the feet. (*Gelativo-sulphureous baths ; three glasses of the decoction of dulcamara ; lotion with the alcoholic solution of corrosive sublimate, diluted ; soft lint between the buttocks.*) This treatment had produced some amendment within a few days. The vesicles on the inner parts of the thighs were touched with nitrate of silver and soon got well. Before a month had elapsed the inflammation of the scrotum, as well as that of the lower and posterior part of the raphe, had subdivided ; but the parts about the anus still continued red, slightly chapped, and discharging.

The inflammation having returned, the application of the oxide of zinc ointment was substituted for the lotion with the solution of corrosive sublimate. On the 18th of June the pruritus was excessively violent ; the compresses of lint were dipped in a lotion contain-

ing twenty-four drops of laudanum. The psoriasis of the hand was also worse. The patient called my attention to several fresh patches of a red colour on the palm of the left hand. These were neither covered with papulæ, vesicles, nor pustules ; the epidermis, over the parts of the skin affected, acquired a yellow colour ; at length, after the lapse of rather more than twenty days from the attack of the pruritus and heat, it split into fissures. June 29th.—No new vesicles have been evolved, but the skin of the upper and inner parts of the thighs is still red and inflamed. A fissure has taken place in the direction of the median line, and several phlyzacious pustules have appeared upon the upper part of the buttocks. They are as large as small boils, from which, however, they differ by being covered with a firmly adherent scab, and exhibiting no sign of a sloughy core in their centre. The psoriasis is better. The pruritus about the verge of the anus has increased, and seems to be excited by emollient fomentations. July 1st.—The patient complains loudly of the pruritus of the margin of the anus, which was excessively troublesome during the night. I applied the nitrate of silver to those points of the inflamed skin between the buttocks, which appeared to have lost their cuticle. Bathing the affected part with a solution of sublimate, having on former occasions given great relief, I recommended N \* \* \* to make use of a wash of this kind four or five times a day ; and with the same advantage as before. July 2d.—Five or six small round tubercles, which had existed for several weeks on the scrotum, terminated in suppuration. The patient was going on better, but from the 10th of July to the 15th of August, when he seemed to have completely recovered, he endured several unexpected and severe relapses. N \* \* \* now went to sea-bathing quarters, from whence he returned in the month of October, with the skin about the anus covered with squamæ. These were got rid of by steam douches to the parts several times a day, by which the skin regained its pliancy. Another relapse now induced me to propose arsenic to the patient, to the use of which he consented. On the 10th of November he began taking six drops of the solution of the arseniate of soda ;<sup>1</sup> the dose was gradually increased, and carried at last to the length of thirty-four drops. The medicine caused neither diarrhœa nor vomiting ; but on two or three occasions it excited shivering fits, a slight dry cough, and general uneasiness, which ought to have induced the patient to abandon it for a time. Up to the 15th of May, 1826, ten grains of the arseniate of soda had been taken, and the recovery was complete, at least in appearance, for the skin possessed its natural colour, and was covered by a smooth and supple epidermis, like that of the integuments in a state of health.

CASE XLIX.—*Chronic eczema of the hairy scalp, ears and cheeks, cured by the decoction of dulcamara, solution of corrosive sublimate, and oxide of zinc ointment.*—A. B., thirty years of age, asked my advice on account of an extensive eczematous affection of both ears, on the 5th February, 1826. This disease made its first appearance on the occipital region, after severe labour, and incessant watching during the illness of one of her children. A month afterwards it spread to the right ear, and from thence to the neighbouring regions ; the affected parts, according to the patient's report, had repeatedly discharged great quantities of a reddish fluid. This discharge ceased occasionally, and then returned more copiously than before. It was accompanied by intolerable pruritus. The patient's nights were sleepless, and she had lost flesh, but in other respects she was well. Feb. 5th.—The skin of the right side, affected with eczema, which has spread over the whole of the ear and a great part of the cheek, has a marbled and variegated and moist look, in one place exhibiting small red patches, where the corion is exposed ; in another, being covered with thin, yellow, laminated and strongly adherent scabs ; and in a third, having little points of blood scattered over an excoriated surface, amidst blackish incrustations which scarcely rise above the level of the integuments. The whole of this surface exhaled a sickly and very unpleasant odour, and a yellowish serous fluid exuded from the points which were most violently inflamed. On the left side, the cheek and ear were very similarly affected. Every part implicated was the seat of the most violent pruritus. No derangement of the digestive, nor of any other apparatus, could be detected. [Three

<sup>1</sup> This is the liqueur or solution de Pearson of French writers.—R. W.



glasses of decoction of *dulcamara*, and a spoonful of the liquor of *Van Swieten*, (a solution of sublimate, a quarter of a grain to the oz. of fluid) every morning, fasting.] These medicines were not taken without some inconveniences, which were relieved, however, by the use of the warm bath, and, at the end of a month, the disease had almost entirely disappeared; a few yellowish laminated crusts alone remained, which were soon thrown off, after a few applications of the oxide of zinc ointment. The cure in this case was completed without any relapse.

CASE L.—*Eczema of the hairy scalp (teigne muqueuse), with pediculi; subcutaneous abscess, gastro-enteritis: recovery under the use of the warm bath, local bleedings, and emollient applications.*—I was called to see a little boy, five years of age, on the 6th of January, 1826, the occipital region of whose head discharged a yellowish viscid fluid abundantly, which glued the hair together. I found the child affected with eczema of the scalp, and acute inflammation of the gastric and intestinal mucous surfaces. A straw-coloured fluid exuded from numerous points of the skin; other parts were covered with soft, yellow scabs, stuck amongst the hair. The head rested on the left shoulder; upon the occipital region several small subcutaneous phlegmonous tumours were detected by the touch, which were extremely painful. One of them, situated on the left side, near the mastoid process, being felt to fluctuate, was opened, and a tea-spoonful of laudable pus evacuated. A chain of inflamed and swollen lymphatic glands could be felt along the lateral and posterior parts of the neck. Rather acute pain in the epigastric region, occasional efforts to vomit, dotted redness of the tip, and whiteness of the base of the tongue, obstinate constipation, an accelerated pulse, heat and dryness of the skin, added to great prostration of strength, were the principal symptoms of gastro-intestinal inflammation. The breathing was unaffected. (*Five leeches to the epigastrium, mucilaginous drink, emollient cataplasm to the occipital region.*) The leech-bites bled freely. From the 7th to the 13th, the gastro-intestinal symptoms were treated by the warm bath, administered twice a day, and by emollient cataplasms and glysters. The little patient, mean time, was supported with gum-water, and milk and water mixed. On the 15th he was convalescent. During all this interval the affection of the scalp showed no improvement under the continued application of emollient cataplasms. The mother even assured me that the disease of the scalp had got worse since the inflammatory affection of the gastro-intestinal membrane supervened. I now removed the hair from the affected parts; the soothing poultices were continued; a blister was applied to the left arm, and twenty-five days afterwards the scalp was completely whole.

CASE LI.—*Repeated attacks of acute eczema rubrum at irregular intervals during a long succession of years.*—The following interesting case is given by Dr. Marcet, in the second volume of the *Medico-Chirurgical Transactions*:

I was called, he says, to attend a gentleman, about thirty years of age, rather of a spare habit, and pale complexion, for the first time, in March, 1808, on account of a complaint in the skin, which is apt to recur at irregular periods, and to which he has been subject, more or less, ever since the age of sixteen.

The attacks of the disease are generally preceded for a few hours by what the patient calls a twinging sensation at the pit of the stomach, but without nausea, fever, or even loss of appetite. He then begins to feel a sense of stiffness and heat in the various parts of the body; these parts, in a few hours, are observed to become red, and to swell rapidly to a considerable degree. The hands, the feet, the ears and the lips, are the parts which the disease principally attacks. But it also frequently appears in the face and eyes, and sometimes even in the hairy scalp. Indeed, in the severest attacks, there is no part of the body which can be said to be totally exempt from it. The extremities, however, especially the hands and feet, are by far the most conspicuous seats of the complaint.

When the parts are attentively examined on the second or third day of the disease, the cuticle appears to be raised in innumerable small vesicles, some of which are distinct, so as to give a roughness to the surface, though most of them are confluent, forming an uniform swelling, with a shining appearance. Soon, however, on the swelling abating, which commonly happens on the third or fourth day, the

cuticle begins to crack, and to rise in patches, discovering an inflamed surface, with numerous small superficial ulcerations, from which there oozes a fluid, having a strong disagreeable smell. On the extremities, and in the bends of the toes and finger-joints, pretty deep fissures or ulcerations are formed, which, however, heal readily, and in a day or two the cuticle falls off in large patches, sometimes as large as the hands, presenting an appearance which may be best compared to that of the trunk of the plane-tree when casting its bark. Sometimes the nails themselves are cast off, the new nail gradually pushing up the old one, which appears dead and withered. A few days after this, however, the new cuticle, which is at first red and inflamed, generally assumes its natural appearance, so that in the course of about a fortnight or three weeks from the beginning of the attack the complaint is commonly entirely removed. But at other times, and at the moment when the patient thinks himself convalescent, the new cuticle becomes hard and dry, and cracks again as in the first instance, producing a repetition of the symptoms just described.

When I saw this patient for the first time, (in March, 1808,) it was on the 4th or 5th day of the attack, which happened to be one of the most violent he had experienced for some years. The swelling was still conspicuous in many parts, and these were in both his hands, particularly in the palms, where the cuticle is the thickest, and between the fingers, deep cracks and ulcerations. He had, however, no fever, no thirst, no quickness of pulse, and he complained only of a sense of weight, heat, and stiffness in the affected parts. The corners of his mouth, the ears and the feet were this time but slightly affected.

Finding that amongst a variety of remedies and applications, which he had tried at various periods, with a view to relieve the immediate symptoms, he had never made use of poultices, I recommended a linseed-meal cataplasm, with twenty drops of the extractum litharg. acetat. to be applied to the hands. This produced a sensible diminution of the tension and swelling, and upon the whole, great relief was obtained by this application. But soon after the removal of the poultices, the heat and stiffness gradually returned, so as to require a repetition, and an almost uninterrupted use of the same application; and even during his convalescence (which took place in three or four days), and when the parts were fast returning to a natural state, he still found it expedient to have, occasionally, recourse to a poultice in order to remove uneasy sensations.

With regard to internal medicines, having no distinct precedent to assist me in the choice of any particular treatment, and seeing evidently, from my first visit, that the patient was gradually recovering, I contented myself with regulating the state of the stomach and bowels. But with a view to prevent the recurrence of similar paroxysms, I suggested that he should try a course of sarsaparilla, that he should make frequent use of neutral salts, and above all, that he should give a full trial to the warm bath, a remedy which, to my great surprise, had never been recommended to him before.

Upon inquiring into the general history of this uncommon disorder, I was informed that the attacks had of late years recurred two or three times in each year, and appeared to have no connection with particular seasons. Some of these attacks have been very slight, and they have sometimes been so partial as to be confined to one hand, or even to one finger. In these instances the patient thinks that the progress of the disease has been prevented by the use of nitre and aperient medicines.

This gentleman's general constitution appears to be delicate, though, excepting the complaint above described, he is not subject to any habitual ailment. In general he sweats easily and profusely upon the slightest exertion when in health; but, at the time of the attacks, he complains rather of a deficiency in that secretion. His diet is moderate, and he has in vain tried to trace his complaint to peculiarities of regimen.

Two years had elapsed, when, about the middle of last May, the same gentleman desired that I should see him again. I found him in a state perfectly analogous to that which I have just described, but with symptoms more severe than in the former instance, though still unattended with fever or other obvious constitutional affection. The desquamation of the cuticle all over his body was such, that on raising his bed-clothes the spot where he lay was found literally strewed



with scales, and I do not overrate the fact in saying, that a handful of these might easily have been collected. The hands, feet, lips, face and even the eyes, especially the outer corners of the eyelids, were the parts most severely affected. The cuticle of the heels in particular, and that of the soles of his feet, came off in patches as large as the palm of the hand. This attack had begun about twelve days before I saw him, with a sense of oppression in the præcordia, and it was immediately preceded by, and (he thinks) obviously connected with, his having been exposed to a severe shower of rain. After raging for a few days the complaint had in a great degree subsided, but had broken out again just before I saw him, with redoubled violence.

I had the satisfaction of finding, upon inquiry, that with the exception of some slight threatenings, this was the only attack which he had experienced for the last two years, and he ascribed his having been so much more free from his complaint, during that period, to the frequent use of the warm bath, and to the great attention he had paid to the state of his bowels. He had occasionally used cold sea-bathing with apparent benefit.

The same local treatment was adopted, as in the former instance, namely, the application of poultices to the hands and feet; and with regard to internal medicines, I ordered a saline antimonial mixture, which, by exciting a moisture on the surface, appeared to allay the tension and uneasiness. In the course of a week he was in a state of full convalescence.

Since writing the above, I accidentally met, a few days ago, (June, 1811,) the gentleman whose case I have related; he informed me that he had within these few weeks experienced another attack of the disease, perfectly similar to those I have described, though in a slighter degree.

March 1st, 1813. On inquiring into the state of my patient, of whom I had lost sight for the last twenty-one months, I found him just recovering from a severe attack of his complaint, with his cuticle partly renewed, partly falling off in large patches, of which he showed me a handful which he had just collected. He informed me that he had had eleven attacks of his disease since we had met last, that is about one every two months, some of which, however, had been very slight. The only additional particulars, I collected from him, were that he had found a brisk purgative more useful in mitigating the symptoms on their first appearance, than any other kind of remedy; and that, during the severer attacks, he had noticed a sensation of heat and irritation in his urethra, with some difficulty in passing his urine. His looks and general health are not materially impaired.

CASE LII.—*Congenital ophthalmia, aphthous inflammation of the mouth, roseola, strophulus, sordes of the scalp, slight eczema impetiginodes.* Madame A. B. was delivered, towards the end of March, 1826, of a female child, well formed, but with the conjunctivæ of both eyes slightly inflamed. This child was confided to a nurse of a delicate constitution, whose milk, though abundant, did not seem greatly to benefit the infant. Despite a variety of measures—soothing collyria, counter-irritants behind the ear and to the nape of the neck, and the warm bath persisted in for the space of a month, the affection of the eyes did not yield before the end of the seventh week. From the twelfth day after birth, the lips, the edges of the tongue and the inner surface of the cheeks were attacked with the pultaceous inflammation peculiar to new-born infants, and characterized as *aphthous*. The suckling was temporarily suspended, and the child fed on milk and water. Nearly at the same time the body became covered with a roseolous eruption so general that the nurse and the parents believed the infant to be attacked with measles. This affection disappeared completely in the course of the third day. The aphthous affection did not extend beyond the mouth; the evacuations of the infant, however, showed considerable disturbance of the primæ viæ. The suckling was recommenced with a strong nurse as soon as the child could take the breast without pain. The child seemed at first to suffer from griping in the bowels; and a number of large papulæ were evolved on the thighs and buttocks (*strophulus*); the child slept little, but took the breast freely, and the discharges from the bowels soon became natural. A slight discharge took place from behind one of the ears, which was rather encouraged, and at length a cluster of small yellow pustules appeared on the right cheek, and another of larger dimensions

on the parietal region of the same side. Both of these clusters of pustules speedily became covered over with a moist yellow incrustation which dried up in a few weeks afterwards,—that of the face falling off spontaneously and leaving a small red blotch upon the skin, that of the hairy scalp being removed by means of a softening poultice. By the same means a thick yellow, and, as it were, imbricated and very adherent scurf or sordes, which, since the period of birth, had formed a sort of covering to the scalp, was removed from its surface. The skin under this deposit, which extended some way over the naked part of the forehead, was quite healthy, and did not appear ever to have been inflamed. During the whole of the treatment the infant was put into the warm bath almost every day.

CASE LIII.—*Inveterate eczema impetiginodes; remarkable modifications in the appearance of the eruption (furfuraceous or squamous state of the face, hairy scalp, and palms of the hands).* P. B., a hackney coachman, fifty years of age, in the habitual enjoyment of good health, though he occasionally indulged in wine and brandy to excess. During the month of August, 1832, several small vesicular spots appeared on the right forearm. Feeling some uneasiness in the lumbar region, the patient applied a Burgundy pitch plaster to the part; the application was followed by an eruption that spread in the course of a few days to the thighs and legs, accompanied with severe itching, especially during the night, but which even in the day was occasionally so annoying as to oblige him to get down from his box that he might scratch himself more at his ease; this indulgence was accompanied and followed by the discharge of a quantity of reddish serum, which, concreting subsequently, formed scabs upon the diseased surfaces.

On his entry into the Hôpital de la Charité on the 11th of March, 1833, the legs were covered with thick yellowish or dirty gray-coloured incrustations, rough, laminated, and irregularly cracked in the course of moist and ragged-looking chaps of the skin. On the thighs, forearms, and lumbar region, the surface of the dermis under the incrustations was moist and excoriated, and sprinkled with points of a very vivid red, from which the discharge appeared to exude. The pruritus was not now much complained of; the patient's health was good, he slept quietly, and was free from any derangement of the principal functions (*twelve grains of the sulphuret of antimony; sulphureous baths, mucilaginous lemonade, the three quarters hospital allowance of food*). March 15th.—The sulphuret of antimony was carried the length of fifteen grains at each dose without producing uneasy feelings or moving the bowels. The sulphureous baths had modified the appearance of the eczema; the incrustations had partially disappeared; the exposed dermis was red and moist (*alum washes; alum ʒi, water lbs. ii.*). The alum washes occasioned severe scalding pains, and had to be discontinued after the second day. March 19th.—The patient was bled; the blood was not buffed, but very much cupped. The sulphuret of antimony in doses of thirty-six grains was continued to the 21st without inducing catharsis or any other appreciable effect on the system. Eighty grains of black hellebore produced no purgative effect, which speedily followed the exhibition of a few pills containing half a grain of the tartrate of antimony. These pills and the sulphureous baths were continued. One grain and a half of the tartrate of antimony, made up into three pills, and taken in the course of the twenty-four hours, kept the bowels constantly open up to the 14th of April, at which time the medicine began to cause vomiting, and the eczema, treated besides by compression, did not appear to be making any progress towards recovery. Its appearance varied exceedingly from day to day; the legs were alternately dry and scaly, or running and excoriated; the general health had suffered no change.

After being left quiet for a few days, the patient was put upon the solution of arseniate of soda in doses of thirty drops daily. About the 18th of April the appetite fell off remarkably, an occurrence which was followed by a notable exacerbation of the eczematous affection. On a sudden the pruritus became more troublesome, and the skin redder and covered with vesicles, from which an abundance of reddish serum was poured forth to concrete into scabs of considerable thickness, especially on the legs. The pruritus was now exceedingly severe, and was accompanied by a very painful sensation of heat in the diseased surfaces; the pulse became quicker, the sleep was disturbed, the appetite failed entirely. A copious bleeding gave an immediate check to these symptoms. The blood was buffed. Large cataplasms



were applied to the inflamed surfaces. Cold bathing was substituted for the sulphureous baths, and the patient was put upon whey. A few days of this regimen and treatment sufficed to allay the general excitement of the system and to lessen the inflamed state of the skin. Barley water, acidulated with nitric acid, was prescribed, and the arsenical solution recommenced. On the 6th of May the legs were free from scabs, and the skin had lost its redness; the excoriations were paler, but dotted with points of blood as if the skin had been slightly abraded by the action of a rasp. This improvement, however, did not continue long; renewed febrile symptoms were followed by a reappearance of the eruption. The patient was bled again, and again put upon the whey diet and the use of the cold bath. The blood was still buffy. The legs were gently anointed with lard, and covered with emollient cataplasms.

At this period the face was attacked with an eruption of a similar kind, followed by furfuraceous desquamation principally from the parts that were covered with hair. Small impetiginous scabs were also formed upon the eyebrows. The hairy scalp, especially its anterior part, was soon covered with a very abundant white and glistening desquamation, the scales of which clung to the hair. The skin, when rubbed and freed from this species of scurf, did not appear much inflamed.

On the palmar aspect of the hands, the desquamation had a different character. Large flaps of cuticle were detached from the skin, which appeared humid and red underneath them. The cold baths and whey diet were continued till towards the end of May, a period at which the eczema of the legs had a favourable aspect. The scabs were no longer reproduced, the discharge had almost entirely ceased, and the general state of the patient was satisfactory. June 11th.—The nitric acid sherbet was resumed, and the bathing continued. Lard was ordered to be rubbed upon the tender surfaces, and the disease appeared stationary; but on the 12th, the skin of the legs in several places again took on an inflammatory action, and became covered with impetiginous incrustations; the patient was bled for the third time, and after a few simple baths, improved once more. The patient left the hospital on the 24th of July, 1833, not completely well; the disease, however, had become supportable; the general health was good; the micaceous desquamation of the scalp still continued abundant, without itchiness or unpleasant sensations. (a)

(a) A good clinical lesson is conveyed in the following case, recited by Dr. Carswell (*ut supra*). "We now come to the consideration of the second case of eczema impetiginodes, which is one of considerable interest, even in a diagnostic point of view, owing to the unusually obscure and complicated appearances which it presented. I shall first read you the history of this case, taken from the case-book, before offering you the explanatory observations which it suggests.

"History of case.—John Smith, æt. 35, admitted December 4th, 1838, formerly a groom, but for the last three years has been employed as a gardener; he is of a sanguine temperament, tall and muscular, married, and of regular habits; parents are living, and generally healthy; his own health has always been remarkably good. Fourteen years ago (before his marriage) he contracted gonorrhœa, and got well in about a fortnight by the use of internal remedies. He declares he never had any venereal complaint since, nor, indeed, ever been in "harm's way." In the summer, six years ago, he had an eruption of small pimples all over his body, on glans penis and scrotum, as well as on other parts. These were attended with very little itching, and died away spontaneously towards winter; they have returned every summer about June. The eruption was supposed, by his medical attendant, to be syphilitic, and the patient was salivated three times within the twelve months, three years ago. At this time he states that he had a small swelling in the groin, which, however, soon subsided after leeching and rest. After the first salivation the eruption assumed a new form; the pimples broke and discharged a yellow fluid, which concreted into thick scabs. Similar pimples now began to appear on the scalp and face, being preceded by severe headaches. Each pimple broke, enlarged, joined with neighbouring ones, and formed large discharging surfaces, which afterwards gradually healed at the centre, on various parts of the head, trunk, and extremities. His throat became sore; there were large ulcers formed

CASE LIV.—*Eczema of the navel; rapid spontaneous cure followed by chronic gastritis; good effects of a blister and an issue in the original seat of the eruption.* F. J. M., forty-six years of age, was admitted

in it, and it continued in this state for two months. He became gradually worse and worse, and was, as stated, admitted the 4th December.

"Present symptoms.—His face is nearly covered with the eruption; the patches are irregular in size, but generally assume a circular form; some parts are erythematous, covered with a furfuraceous desquamation, and around the margins of these patches, which have healed in various degrees in the centre, the still discharging eruption forms scabs and crusts of a yellow colour, by the concreting of the matter furnished by the pustules. There are numerous patches on the head, behind the ears, &c. &c.; the margins of the patches are not raised, but the skin around is red and shining; the eruption heals in the centre of the patches, and the parts, once the seat of the disease, do not again become affected. The affected parts are hot, itch, and smart, and heat only makes them worse. There are several large patches on the back, and on the front of the chest, one on the left scapula, and one on the right breast, forming a complete ring. Another very large one is situated just below the knee, healed in the centre, the skin there being of the natural colour, and another patch under the left thigh, four inches in breadth. There are small red papulæ, containing fluid of a yellow colour, like impetiginous pustules, diffused over the body in various parts.

"The upper lip is much swollen and protruded; the eyelids are thickened; there are lippitudo and coryza; the sight is dim and impaired, and the eyeballs bloodshot.

The skin is, at times, very hot and dry; he is very much weakened by the disease; appetite is pretty good; thirst; sleep bad; very little perspiration; bowels regular; urine high-coloured, and rather increased in quantity; tongue clean and natural.

"The history of this case suggests two inquiries: first, the nature of the eruption considered in itself; and, secondly, its remote cause or origin. As to the eruption, it presented far from common appearances, both as regarded its general characters and the great extent of the surface which it affected; in some of its characters it bore a faint resemblance to psoriasis, particularly in the redness of the inflamed surfaces and the presence of the furfuraceous desquamations, or, rather, thin whitish, transparent, laminated scales, which covered a great part of these surfaces. It was, however, only in these respects that it had any resemblance to psoriasis, and that but a very imperfect one; for, in this disease, the squamæ are white and opaque, and are not only accumulated into thick rugous masses, in chronic cases, such as that of our patient, but the inflamed cutis is thickened, hardened, and fissured, which in this case was smooth and shining. Besides the somewhat scaly or squamous character of the affection, which gave to it a resemblance to psoriasis, there was also another circumstance calculated to lead astray, viz., the tendency of the large patches to heal in the centre; but this circumstance is observed in other and different cutaneous diseases, and particularly in that with which this patient was affected.

"Besides these negative characters of the disease, there was one of a positive nature, which at once served to distinguish it from psoriasis, viz., the *incrustations*, or *scabs*, which occupied principally the outer margin or circumference of several of the patches on different parts of the body. These were of a yellowish or yellowish-brown colour, obviously formed by the concreting of a viscid secretion, such, in fact, as is observed to occur in impetigo or eczema impetiginodes. No such kind of crust or viscid discharge occurs in psoriasis, although in some cases of psoriasis, inveterata, after an exacerbation of the inflammatory excitement, a slight discharge may take place; but even here the resemblance to impetigo is extremely remote in this as well as in many other circumstances.

"Could there have been any doubt as to the character of the disease, as indicated by the general appearances of the patches, and particularly by that of the scabs, this would have been removed by the presence of the impetiginous pustules on several parts of the body.<sup>1</sup>

<sup>1</sup> A model in wax of a part of the body affected with the disease was exhibited and described.



into the Hôpital de la Charité on the 3d of June, 1833. Five years prior to this date he had been troubled with an eruption over a space as broad as the palm of the hand around the navel, accompanied with smarting and pruritus, from which a quantity of red fluid was dis-

"This form of impetigo is, as I have already said, far from being common. It is observed in persons of a lymphatic or scrofulous constitution, and most frequently as a sequela of venereal infection, and possibly in those on whose constitutions mercury exercises an injurious influence. It is stated that this patient had a gonorrhœa fifteen years ago, which was removed in the course of about a fortnight after the use of internal remedies, probably no mercury having been employed. Nine years after he had, in summer, what appeared to have been a papular eruption over the whole body, including the glans penis, and which disappeared spontaneously towards the winter, and which had returned every summer since. This eruption was supposed, by the medical attendant of the patient, to be syphilitic, and three years ago he was salivated three times within the twelve months. Instead of this treatment having been of any service to the patient, the disease with which he was afflicted became worse after the first salivation. Instead of a papular there now appeared a pustular eruption, occupying first the head and face, and accompanied by severe headache. It was at this time, also, that the throat became affected, and was the seat of ulceration for about two months. From this period, also, the cutaneous disease increased in severity until it had arrived at that stage at which you saw it when he was admitted into this hospital.

"When I first saw this patient I did not attach much importance to the venereal origin of his disease, nor was this to me a matter of consequence, as the treatment employed was that which has been found to be, in most cases of this nature, by far the most efficacious.

"You have heard that he had fifteen years ago only a gonorrhœa, although our evidence on this point is by no means conclusive. However, were his statement correct, it would not be a solitary instance of syphilitic eruptions succeeding to gonorrhœa after intervals of many years. I have myself witnessed cases of this kind, in which the cutaneous affection itself, either of a scaly, vesicular, pustular, or tubercular character, bore sufficient evidence of its origin; and Biett, of the Hospital of St. Louis, of Paris, who has had the most extensive opportunities of investigating this subject, long since informed me that the occurrence of syphilitic eruptions after gonorrhœa was far from being uncommon.

"Numerous experiments, particularly those of M. Ricord, have, indeed, lately demonstrated that the primary affection of the mucous membrane is, in many cases of gonorrhœa, of the same nature as in chancre, the puriform discharge in these cases, when introduced into the cutis, being followed by the formation of a true venereal sore, or chancre, and its constitutional consequences. From a review of the history of this patient's case, therefore, you will no doubt be disposed to consider the vesiculo-pustular affection which he presented of syphilitic origin. The sore throat, combined with successive attacks of the cutaneous affection, would, by most physicians, be considered conclusive evidence in a case of this nature.

"The treatment in this case was in the highest degree successful; how far the cure will be permanent is yet a question. However, the further use of mercury in a case of this kind would have, I am certain, as it already had done, acted most injuriously. Indeed, I may say, that almost all the bad cases of syphilis which I have seen, more especially when the throat was extensively ulcerated, the nose destroyed, nodes of the bones, excruciating pains, &c., have occurred in persons who had undergone repeated courses of mercury, and without imputing this to the deleterious operation of the mercury alone, it is no less an important practical fact that such consequences too frequently follow the operation of this medicine in constitutions contaminated by syphilis.

"The following was the treatment adopted in this case:—

"Dec. 4. Venesection 3xii; *sol. of hyd. of potash*<sup>1</sup> 3ss thrice a day; middle diet.

"6. Blood bled and cupped; skin less hot.

<sup>1</sup> The solution of the hyd. of potass. employed in the hospital contains one drachm to the ounce of water.

charged; this in all likelihood was a cluster of eczematous vesicles. After continuing a month, the disease very quickly disappeared, without any kind of very active treatment having been employed for its cure. Previously to this attack the patient had never been affected with any symptoms of indigestion; but from this time he began to complain of a feeling of weight and a disordered state of the stomach and bowels. He now felt sick, and showed some inclination to vomit. Several days of rest, demulcent drinks, and leeches to the epigastric region subdued these unpleasant symptoms; but the digestive functions continued weak; the patient could not eat of every thing indifferently; he was only comfortable when taking milk and light broths; meat and wine were excluded from his regimen. The patient, after suffering in this way for fifteen months, got a little better, but the improvement did not continue long, and the former symptoms returned; he therefore sought admission into the Hôtel Dieu, where he was bled twice with leeches from the anus, and ordered to take the bath several times. He left the hospital in a fortnight very little relieved.

When M. entered La Charité, he looked pale and was considerably reduced. The tongue was white in the centre, and rather red at the tip; the epigastrium was painful. He complained of distaste to food, of flatulence, a painful sense of constriction across the stomach, especially after taking certain articles of food, amongst which fresh vegetables were particularly mentioned; he had also acid eructations, and a sour taste elung about the gums; he was occasionally sick and had a more copious secretion of saliva than proper. The stools were natural, the respiration was free, the pulse good; there was no heat of surface. The patient, however, was habitually dejected and melancholy. (*Demulcent gummy drink; beef tea, soup and milk for diet; and with a view to restore the eruption of the navel, the recession or suppression of which seemed to have preceded all the gastric symptoms since endured by the patient, a blister was applied over the umbilicus.*) June 9th.—The patient, whose sensations appear to be very acute, complained of his inability to bear the pain of the blister; one-half of the blistered surface was therefore allowed to heal up; the other was kept open, and so long as the artificial inflammation thus excited was maintained, the stomach felt less oppressed and the digestive powers appeared stronger. The patient, however, made new complaints of the blister, and it was healed up on the 16th, but replaced on the 18th by a small issue established above the navel. After the 25th the improvement was remarkable. The tongue became less loaded, and the countenance wore a better aspect. Milk, and a very small quantity of solid food, now composed the diet of the patient. On the 5th of July he requested to be discharged. The digestive functions were then greatly improved; the appetite was better, the patient ate and digested without difficulty the quarter hos-

"R. *Creasote*, one drop;

*Water* 3vj; a lotion for the affected part.

"8. Lotion caused some smarting, and was decreased in strength; two ounces additional of water. Increase solution to two scruples.

"11. Heat and itching less; eruption paler. *Sol. of hyd. of potass.* 3i.

"15. Improving rapidly. *Sol. of hyd. of potass.* 3½ scruples.

"18. Much less redness, heat, and smarting; lotion diminished in strength from its causing too much tingling. *Sol. of hyd. of potass.* four scruples.

"22. Eruption still less red and tingling; patient feels much easier, but had an attack of headache and sickness, from having taken 3ss of the solution, by mistake, more than was ordered.

"25. Venesection 3vj; *sol. of hyd. of potass.* 3iss.

"From this period up to the 10th of January, the general health of the patient and the cutaneous affection gradually and steadily improved.

"The use of the creasote lotion was continued, with some variation in its strength, and the solution of the hydriodate of potash gradually increased to ʒv. A few days after the patient was allowed a more generous diet. On the 22d he was nearly well, desirous of returning home; and on the 24th was discharged cured, the only remains of the cutaneous disease consisting in a reddish discoloration of the parts of the skin which were affected by the eruption."



pital allowance, and could even take a little wine without inconvenience. He was discharged with a recommendation to keep the issue open. (a.)

(a) The following cases related by Mr. Erichsen (*Med. Gaz.*, May, 1843), will illustrate the value of the arsenical treatment.

"The only disease," says Mr. E., "amongst the vesiculæ that can ever necessitate the employment of arsenic is *chronic eczema*. This is more particularly the case when this affection, as has already been stated, has assumed a furfuraceous or scaly condition, closely resembling some forms of psoriasis, or pityriasis, and indeed in some instances, as Biett has shown, actually passing into these diseases; the scales becoming dry, laminated, and of a whitish, grayish, or yellowish-gray colour; the subjacent skin being red, thickened, cracked, and inflamed; the vesicular element, however, reappearing in the progress towards a cure. However obstinate this form of the disease may usually be, it becomes particularly intractable when affecting certain regions of the body, as the scrotum, labia, and inside of the thighs, and will, when of old standing in these situations, seldom yield to any remedy but arsenic. The following is a case in point:—

"Mr. W. B., æt. 49, of relaxed debilitated habit of body, applied to me, in October last, for a disease of the scrotum, thighs, and breast, under which he had been labouring between four and five years. He ascribed his complaint to his having drunk some porter when overheated, soon after which act of imprudence he experienced considerable irritation about the scrotum and thighs, on which parts a vesicular eruption made its appearance: this was followed by a scaly condition of the parts, and the affection, after a time, spread to other parts of the body, as the arms and chest. He has been subjected to a variety of treatment, and has been salivated twice, but without deriving any benefit. When he applied to me, the scrotum and inner aspect of the thighs were covered by a number of thin, flimsy, yellowish-gray scabs, from under and between which an occasional exudation of a serous fluid took place; the subjacent skin was red, inflamed, and fissured, and there were several patches of a similar character upon the chest, occupying a space of about the size of the hand, as well as one on the right arm. The itching and tingling in the affected parts were severe, so much so that it was with difficulty that he could keep his hands from tearing them. When I first saw him his mouth was sore from the effects of some mercurial that had been ordered by the physician who last attended him, and by whom he was sent to me. He was, therefore, in the first instance, merely directed to take some aperient medicines, and to make use of soothing applications to the affected parts. On the 4th November he was put upon a course of Fowler's solution, beginning with two and a half minims twice a day, and increasing the quantity up to six minims three times a day; this was continued, with two intermissions on account of constitutional disturbance, up to nearly the end of December, when the disease was entirely cured. The external applications that were had recourse to were, in the first instance, the ointment of the white precipitate, which was, as the disease became more passive in its characters, changed for that of the biniodide of mercury, diluted with four parts of spermaceti ointment.

"Useful as the solution of the arsenite of potassa unquestionably is in cases similar to the preceding one, it is equally serviceable in dry chronic eczema affecting other parts of the body, as the following instance will illustrate.

"Eliza Penny, æt. 16, of a lymphatico-bilious temperament, came under my care on the 17th November, 1842, for a disease of both arms under which she had laboured from the very earliest infancy (from the age of three months). The affection in question was clearly eczematous. The diseased integument appeared thicker and rougher than natural, was covered with flimsy exfoliations of the epidermis, was exceedingly irritable, itching and tingling to an intense degree when the patient got warm, and was much fissured about the bends of the elbows and wrists. There was every now and then an exacerbation of the disease with a distinct eruption of vesicles. The patient complained much of languor and lassitude, was pale, or rather sallow in complexion, and menstruated somewhat irregularly. She was ordered the diluted mineral acids internally, with the oxide of zinc

ointment to the affected parts, and the pil. aloes cum myrrhâ, to regulate the bowels and menstrual functions. Under this plan of treatment the general health improved somewhat, and the irritability of the affected skin was subdued. She was then, on the 2d January, ordered to begin the solution of the arsenite of potassa in two-minim doses; these were gradually increased to five, and subsequently to seven and a half minims, three times a day: this she continued for a space of two months and a half, until the middle of March, without being obliged to intermit its use for a single day, at the expiration of which period the arms had assumed a healthy appearance, the skin being smooth, soft, and supple, perfectly free from scales, and without any harshness; it was, however, owing probably to the very long time it had been diseased, of a yellowish or tawny colour, darker than that of the rest of the body. The only external applications used were, in the earlier stages, the ointment of the oxide of zinc, with occasional fomentations during the exacerbations of the disease. These were followed by the ointment of the white precipitate, and subsequently by a lotion of the sulphuret of potassium, in the proportions of a drachm of the salt to a pint of water. The local disease was not only cured, but the general health very decidedly improved by the administration of the arsenic; the patient having gained flesh and strength, acquired a good colour, and declared herself to be in better health than she had ever enjoyed."

In support of a different mode of practice, and as a lesson in diagnosis, I introduce the following "*Aggravated case of eczema rubrum on the genital organs, mistaken for syphilis*. By W. Acton, Esq., Surgeon to the Islington Dispensary. (Read before the Westminster Medical Society.)" A child, nine weeks old, was brought to me by its mother, in great alarm, in consequence of having been told by a medical man that the complaint was venereal.

"The child was a fine stout boy, but very fretful. The eyebrows presented distinct vesicles of eczema. The inside of the mouth and lips free from disease, but just at their margins, and extending for the space of an inch and a half, completely encircling the mouth, the skin presented a dusky hue, and appeared covered with a thin, shining, dry pellicle, like a recent blistered surface, interrupted with cracks and crevices, without exudation, except beneath the chin, where the capstrapping had irritated the surface; and here a serous-looking fluid exuded, and excoriated the surrounding parts. Beyond this, distinct and separate clusters of vesicles could be seen, presenting a dusky hue. On the arms and chest a few small patches of these vesicles were apparent. The disease, however, seemed to have settled principally on the lower part of the abdomen, scrotum, thighs, and nates. The entire surface of these parts presented a shining, but dark or dusky-red surface, as if covered with a thin pellicle, similar in appearance to that found on a healing blistered surface. The temperature of the surface was much above that of the surrounding parts; no vesicles could be detected; this unhealthy-looking skin was creased and plaited, with a disposition to crack; in many places large thin flakes could be detached; every movement the child made appeared to cause great pain.

"The mother states that her other two children are, and have been, quite healthy; her husband has never complained of illness; she has suckled her own child, which has never been out of her sight; has never nursed any other woman's infant. The child enjoyed good health until three weeks old; at this period it was seized with thrush; the throat became affected, and soon after an eruption appeared around the arms, which has gradually spread over the parts now affected. For some weeks the child was under the care of her usual medical attendant, and treated with powders and ointment; the mother, finding the complaint getting worse, consulted another medical man, who, after looking at her boy, told her not to be offended, but her child had the venereal disease, and mercury was necessary for its cure. He prescribed a gray powder twice a day. The terror of the mother was, as may be supposed, great, when made acquainted with her child's complaint; for herself she could reply, and as to her husband's conduct she never had entertained the least suspicion. The medical man was no less positive, and further enjoined her not to suckle the







body becomes of as bright a red as in the first variety. In men, the eruption usually begins on the scrotum and insides of the thighs: occasionally, however, it makes its appearance on the backs of the hands and arms, and still more frequently, on the back and belly simultaneously. Dr. Duncan speaks of a case in which the disease began in the face, which is generally one of the parts last affected. The vesicles are more apparent in *hydrargyria febrilis* than in *hydrargyria mitis*, especially at the beginning of the eruption; at a later period, the contact and friction of the clothes are apt to destroy them. Very small and transparent at first, and surrounded by a red circle, the vesicles of *hydrargyria febrilis*, before long, acquire the size of pins' heads, and become opaque and purulent. When the eruption begins to disappear, it bears a strong resemblance to the efflorescence of scarlatina anginosa on the decline; *hydrargyria*, however, always preserves a deeper shade of colour.

The heat of the skin occasionally reaches to the thirty-eighth degree of the centigrade scale; in no disease perhaps is it so incessant and so distressing. When the eruption extends in large patches, a thick and very offensive discharge takes place from the parts where two surfaces of the skin come in contact, such as the axillæ, the groins, the upper and inner parts of the thighs, &c. The *desquamation* rarely begins at a later period than the fourth day after the appearance of the eruption. The slighter the disease has been, the sooner does the exfoliation of the epidermis commence; it is thrown off in larger pieces in the febrile than in the mild variety of the disease. The desquamation is generally preceded by some soreness of the throat, which appears to be the cause of the detachment of the epithelium of the velum palati and pharynx.

A second exfoliation of the cuticle occasionally happens, and the skin then appears as red as before the first took place; it is only after repeated falls and renewals of the epidermis that the skin in many cases at length regains its natural colour; when this is once removed, the cuticle is no longer detached. This peculiarity has been observed especially in those cases in which the use of mercury was continued after the appearance of the disease.

Headache, nausea, a foul white state of the tongue, constipation, a sense of oppression, violent cough and difficulty of breathing,—such are the general symptoms most usually observed on the breaking out of the eruption; the pulse beats from a hundred to a hundred and thirty times in a minute, the thirst is unquenchable, and the patients call incessantly for acid drinks. At the epoch of the eruption the urine is scanty and high-coloured; it becomes more copious, and deposits a furfuraceous sediment towards the decline of the disease; there is generally either constipation or diarrhœa, and these may alternate with the eruption.

In one case, observed by Alley, the stomach continued irritable and threw off fluids of every description taken into it during the whole course of the disease.

The fever declines when the period of desquamation arrives, and usually terminates towards the eleventh day.

3. The most common cause of *hydrargyria maligna* is the continued use of mercury, or its absorption by the lungs, after the appearance of the first vesicles. A patient labouring under *hydrargyria mitis*, was subsequently attacked with the malignant form of the disease from having remained in the ward of an hospital of Dublin where mercury was administered to others. Many similar facts demonstrate that mercury may in this way act upon or be absorbed into the system.

However this may be, *hydrargyria maligna* is characterized by the following symptoms: the heat of the skin often rises as high as the 42d degree of the centigrade scale; the throat and tonsils are extremely painful; the eruption is of a deep or purple red colour; the face is so much swelled that the features are obscured; the eyelids, completely closed, are lost in the general tumefaction; and when the vesicles break and discharge, the eyes become excessively painful. The skin, swollen and very tender, is covered with vesicles of greater size than in the other varieties of the disease, which pour out a large quantity of acrid fluid. The vesicles are so closely crowded together that the whole epidermis is detached as in variola complicated with measles. The odour of the discharge is characteristic, and by one writer (Spens) has been compared to that exhaled by putrid fish; it is so disagreeable that it makes the patient himself as well as the attendants sick. In

one case related by Alley, in which the cuticle was detached from the back, a discharge of blood instead of serum took place.

The epidermis is thrown off at a much later period in this than in either of the two former varieties, and scarcely happens before the fortieth day from the date of the eruption. The cuticle occasionally falls entire from the hand like a glove. Thick yellow scabs follow the detachment of the epidermis, which peel off in layers; a fresh incrustation succeeds a fresh flow of serum, and each new desquamation discovers a surface less and less red; at length, no further discharge takes place, and a natural healthy cuticle is reproduced. The skin may, nevertheless, continue rough and scaly. The nails of the feet and hands are occasionally detached at the same time, or a little later than the epidermis. In a case, related by Pearson, not only were the nails lost, but such as replaced them were imperfect and deformed, like those of persons who have laboured under eczematous onychia.

Whilst the exfoliation of the cuticle is taking place in one district, a serous or purulent discharge is often going on in another; and when the disease has disappeared from almost the whole surface of the body, a single part may remain painful and inflamed; such was the case in a patient spoken of by Carmichael; the eruption vanished everywhere except from the arms and hands, which remained red and painful, and continued to discharge for three weeks after all the rest of the surface was whole; such was also the case with a young man, treated by Spens, in whom the disease, after having invaded the lower part of the abdomen, the genital organs, the upper and inner parts of the thighs and the hairy scalp, continued long on the latter part, after having rapidly got well on all the others.

As after-consequences of *hydrargyria maligna*, we often observe painful inflammatory affections of the lymphatic glands, large abscesses of the axillæ, and boils on other parts of the body. The skin may also become greatly altered in its external layers. One patient, on his recovery from an attack of *hydrargyria maligna*, was found to have lost all traces of the small-pox, with which he had been marked before. Pearson has seen the hair of the head, beard, axillæ, pubes, and, in great part, of the eyebrows fall off; the eyelashes are more rarely lost, even when the eyelids have been inflamed.

The fever of this form of *hydrargyria*, usually attended with great depression, difficulty of breathing, troublesome cough, fixed pain in the chest, and occasionally with spitting of blood and a sense of suffocation, is generally high in the same proportion as the external inflammation is violent. The pulse is hard and full as it is in pneumonia; the throat is very sore; the voice occasionally hoarse; the tongue, at first white, soon becomes yellow and brown at the base; in one case, however, mentioned by Spens, it continued moist and clean during the whole course of the disease.

Alley only met with a single case in which the appetite was undiminished, but Mullins speaks of an individual attacked with the disease in its severest form, who was hardly satisfied with double the usual hospital allowance of food.

During the whole continuance of the disease patients complain greatly of weakness and depression; their sleep, too, is interrupted, and opium only brings short intervals of forgetfulness. The pain endured is occasionally extreme; words convey no expression of its amount. One of Spens' patients, speaking of what he suffered, said he felt "as if his flesh were torn from his bones!" In the severest cases, a copious and fetid diarrhœa, delirium and coma precede the fatal termination.

The anorexia is commonly as strongly marked in *hydrargyria maligna* as in ordinary febrile affections. One of Alley's patients suffered from convulsions, another passed his urine and feces involuntarily.

Chilly and painful sensations of the skin usually denote an increase or a relapse of the disease, and each renewal is accompanied with the same kind of inflammatory fever as that which ushers in the first attack.

Gangrenous sores, fistula in ano, phthisis pulmonalis, marasmus, &c., have been observed to follow in the train of *hydrargyria maligna*.

These are the three principal forms or varieties of *hydrargyria* which have been described; I ought to say, however, that the disease has been seen to begin in a manner little severe in appearance,



and at a later period exhibit the most alarming symptoms; I have also to state that relapses are more serious and continue longer than first attacks; that the febrile symptoms do not always correspond with the intensity of the outward inflammation; and lastly, that the eruption, though partial, may be followed by painful and repeated desquamations of the cuticle.

*Causes.*—I have seen, and have myself treated a considerable number of patients in whom the exhibition of calomel and the inunction of mercurial ointment were followed by profuse salivation. I have also had a great many water-gilders under my care affected with mercurial trembling or shaking of the limbs; but in all the twenty years I have been engaged in the study of my profession, I have only seen three cases of hydrargyria. How is it, then, that this disease is so rare in France? The disease is incontestably produced by the exhibition of mercury, and the simple discontinuance of this substance often checks its progress, whilst the continued use of the medicine certainly aggravates the symptoms, as its recurrence is induced by too speedy a resumption of the remedy after convalescence from an attack. It would appear, therefore, that some predisposition in the skin or general constitution, or some combination of circumstances, little understood, was required for the production of this disease. We know that certain individuals are extremely unsusceptible of the action of mercury in every shape, whilst others cannot make use of even the smallest quantity of any of its preparations without experiencing its peculiar effects.

Some of those who have suffered from hydrargyria have only had one attack of the disease, although they have undergone several courses of mercury; others after having been affected with the eruption at the beginning of a course, have been enabled to renew it after a time without further inconvenience; in others, in fine, the eruption has only broken out after salivation and the usual signs of the mercurial action have been induced, or in consequence of exposure to cold or some other accidental cause. (a) No age appears to give immunity from the disease, although Pearson remarks, that he never met with a case in a patient above fifty.

The disease is occasionally benign in its character, although a large

(a) Mr. Colles (*Practical Observations on the Venereal Disease, and on the use of Mercury*), tells us that all danger of hydrargyria is removed after ptyalism is fully established.

“What is most worthy of remark is this, that we never find this eruption to make its appearance while the system is under the influence of ptyalism. So that, after we have ptyalism fully established, we may dismiss all our fears on account of this rash. But let us not be lulled into a false security merely because this symptom may not appear in the early part of a mercurial course: for in some instances it does not appear until the mercury has been used for a considerable time.

“I recollect the case of a young woman affected with an induration of one of her breasts, for which I had directed small doses of pil. hydr. combined with extr. conii. No sensible mercurial effect having been produced at the end of three weeks, I increased the dose of the pills; the result was very speedily a slight degree of ptyalism, and with it very full eruption of mercurial erythema, which proved tedious, obstinate, and alarming.

“In this case it is obvious that the eruption attended that slight febrile excitement of the system which mercury so generally occasions when it is just about to act on the constitution. During the first three weeks of its use, the mercury had not produced any sensible effect, and therefore had not excited this eruption. We may in fact declare, that at whatever period of a course of mercury the mercurial fever is first suddenly excited, there is danger of the erythema. Hence it should be a rule with those who are conducting a course of mercury, to watch carefully the earliest effects of each increase in the doses of the medicine, and to question the patient minutely, that he may get the earliest notice of the presence of this affection. When once the first burst of mercurial fever is over, and ptyalism has been fairly established, then the surgeon may carry on the mercurial process to any length of time necessary, (provided he do not allow the action of the mercury to subside,) and yet be under no apprehension of an attack of this rash.”

quantity of mercury has been used previously to its invasion; in other instances, it is malignant and severe after the employment of a comparatively very small portion of the metal, and even before what is called the mercurialization of the system can be supposed to have taken place. An adult became affected with hydrargyria after having taken two grains of the protochloride of mercury (calomel) for two days. (Alley, case IV.) Dr. Dunean saw the same thing happen to a girl nine years of age. Three grains of calomel, administered to a child seven years old as a purgative, have produced the mercurial eruption. (Alley, case III.) The father of this child had been attacked with hydrargyria *maligna* twenty years before, whilst pursuing a mercurial course on account of venereal symptoms. Two sisters became affected with the disease in the Dublin Lock Hospital, after having rubbed in three drachms of camphorated mercurial ointment. (Alley, cases I and II.) One of the severest cases seen by Alley was produced by a *single blue pill*. Lastly, Pearson informs us, that he has seen the disease brought on by the simple contact of the mercurial ointment, and even by that of a few grains of red precipitate.

At Dublin, mercurial frictions appeared more frequently to induce the disease than any preparation of mercury administered internally. Alley supposes that the quantity of camphor which enters into the mercurial ointment (scr. ii to i oz.) used at the Dublin Lock Hospital, is not perhaps without influence in the frequent occurrence of the disease in that establishment.

The symptoms of bronchial affection observed during the course of the disease, induced Dr. Gregory to suppose that cold was one of the potential causes of hydrargyria. A correspondent of Spens', who writes from Madras, also informs him, that the complaint is very frequent among the natives there, who can with difficulty be persuaded to clothe themselves properly during a mercurial course. On the other hand, however, the same catarrhal symptoms have been observed to accompany the disease, under the influence of a very mild temperature.

Men appear to me more subject to this affection than women:

	Hydrarg. mitis.	Hydrarg. febrilis.	Hydrarg. maligna.	Total.	Died.	Cured.
Men.	6	12	10	28	6	22
Women.	4	7	4	15	2	13
Total.	10	19	14	43	8	35

The whole of the cases in the preceding table were seen by Alley within ten years: in three instances only did he meet with the disease in children, in none of which was mercury administered for a venereal cause: in the greater number of adults, the mineral was employed in the treatment of primary or secondary syphilitic symptoms.

360. *Diagnosis.*—To distinguish hydrargyria from other diseases, it is enough to remember that this vesicular affection is induced by mercury; that the eruption and the fever are isochronous, that the inflamed skin in different places secretes a fluid, the odour of which is characteristic; that the desquamation, preceded by pain of the throat and tonsils, occurs from the fourth to the eighth day, &c. It is true that eczema *rubrum* has all the external characters of hydrargyria, the same redness of the skin, and the same form of vesicles. But eczema, unlike hydrargyria, acknowledges no special cause, neither is it, but very rarely, so general; neither is it attended with inflammation of the mouth, sore throat, or salivation. Hydrargyria is essentially an acute disease; eczema *rubrum* is almost uniformly chronic in its character. Hydrargyria is still more easily distinguished from the discreet pustular affection which is often produced by the friction of rancid mercurial ointment upon parts covered with hair; and it will not readily be confounded with any other form of artificial inflammation of the skin. It is well known that mussels, bitter almonds, mushrooms, lobsters, pickled salmon, &c., may cause eruptions which bear some resemblance to scarlatina, erythema, or hydrargyria. Peculiar eruptions have also been observed among the natives of different coasts, who live much on particular species of fish. Alley saw a vesicular eruption of the colour of a boiled lobster, caused by eating a spoiled mackerel. General eruptions have also been seen to follow the administration of camphor and several other medicines. A



knowledge of these facts, and of the circumstances under which hydrargyria is developed, makes mistake all but impossible. (a)

361. *Prognosis*.—In two cases of gonorrhœa, Alley tells us that the discharge ceased on the appearance of hydrargyria, and did not recur after the cure of this eruption. This suspension or disappearance of symptoms is not confined to those of a syphilitic nature only. One patient who commenced rubbing in mercurial ointment on account of a hepatic affection, was soon after attacked with hydrargyria, and the disease of the liver disappeared; another who had taken a solution of the bi-chloride of mercury, (corrosive sublimate,) under the care of a quack, for a similar affection, suffered in the same way, with the same fortunate result. These cures, however, which are mentioned by Alley, were only observed to follow when the mercurial affection appeared under the febrile or the malignant form. Hydrargyria *mitis* produces little or no abatement in the symptoms of syphilis, whether the affection be local or constitutional, nor in those of any other disease. It has also been observed, that when primary syphilitic symptoms appear to be removed on the occurrence of hydrargyria, they almost always reappear after the diminution of the fever which accompanies the mercurial eruption. This is a circumstance which has been remarked by more than one practitioner.

Hydrargyria, being a modification of the constitution other than that generally effected by the action of mercury, Alley, Crampton,

(a) Mr. Colles (*op. cit.*) thinks it necessary to establish a diagnosis between hydrargyria (*erythema mercuriale*) and another more partial eruption also induced by mercury.

"We should carefully distinguish between *erythema mercuriale* and another but more partial eruption arising from the use of mercury. They both come on under similar circumstances; both seem to be excited by the first impression of mercury on the general system. Our attention is attracted to this latter eruption by our patient informing us that he fears he has got the itch—that he could scarcely get a wink of sleep for one or more nights preceding. He then exhibits on his hands and wrists an eruption beginning with small but very distinct red papulæ, some of which, in a more advanced stage, have vesicles on their apices: they chiefly occupy the anterior surface of each wrist, and of the forearm half way up to the elbow; the backs of the hands and fingers are also thickly beset with them. On first view, this eruption closely resembles a form of itch, in which the vesicles are small; but, on more careful examination, you discover that the clefts between the fingers are altogether free from the former, while they are known to be the principal seat of the latter. This eruption is accompanied by a slight degree of fever, and generally by marks of commencing pytalism.

"I cannot say what changes or effects on this eruption would be produced by persevering in the use of mercury, because all the patients in whom I witnessed this symptom were also affected with a smart degree of fever, and complained so bitterly of the itching and of the restlessness caused by it, that I felt afraid to go on with the mercury until the irritation of this eruption had subsided. A few days' use of the antiphlogistic regimen, and abstinence from mercury at the same time, were sufficient for the desquamation of the pustules, and the removal of this rare effect of the mineral.

"I need hardly observe that this eruption differs from the mercurial erythema, by the early appearance of the vesicles—by the eruption being much more distinct, and less thickly set in the skin—by the parts of the body which it affects, and, we may add, by its not extending to the other parts of the body, and not seizing on the angles of flexion in the limbs, where two skins occasionally lie in contact with each other. I suspect this effect of mercury is observed only in cases where the patient is using mercurial frictions. Here, as well as in mercurial erythema, we observe a decided improvement in the primary symptoms uniformly to occur.

"Having for some time noticed this eruption only among the soldiers under my care in the hospital, I at first suspected that it was produced in a great degree by the oatmeal diet, to which they are so much accustomed; but subsequent observation has removed this error, and convinced me that it is attributable solely to the use of mercury. Of course the use of mercury must be resumed as soon as the itching has ceased, and the eruption begins to desquamate."

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and Willan, conceive that the appearance of this eruption ought to have no influence on the duration of the treatment requisite in venereal cases. Several practitioners have, however, been of a contrary opinion, and have stated, that only a very small quantity of mercury became subsequently necessary for the cure of these affections.

Messrs. Garnett and Wilmot, surgeons of the Lock Hospital, never saw hydrargyria so violent as to cause serious fears for the patient's safety, a circumstance which they attribute to their constant rule of immediately suspending the mercury on the first appearance of the disease. Crampton never saw the disease prove fatal, except in a few cases, in which the patients, the eruption being held venereal, persevered in the use of mercury. According to him, the fever which accompanies the eruption, whatever its degree of violence, is never important; the danger of the secondary fever which is lighted up when the skin becomes affected with a purulent discharge, is in proportion to the extent of the denuded and secreting surface. The fever occasionally then loses its inflammatory type, and assumes the hectic character. The patients are seized with shivering fits and tremors of the limbs; they complain of extreme weakness, and show a greater degree of emaciation than can be laid to the score of the discharge. (a)

362. *Treatment*.—To effect the cure of hydrargyria *mitis*, nothing more is necessary than to suspend the use of mercury, to abstract the patient from the influence of a mercurial atmosphere, if he be exposed to one, and to prescribe diluents, a gentle aperient or two, and an occasional warm bath. Pearson was occasionally induced, by considerations unconnected with the best treatment of the affection, to order the mercury to be continued in despite of its appearance. When the disease is on the decline, the use of mercury may occasionally be resumed with advantage, to combat the syphilitic affection for which it was first prescribed: in Davidson's case, related by Dr. Spens, the medicine was given under these circumstances, and the cure of the eruption advanced with not the less rapidity on this account. Another patient who had an ulcerated bubo in the left groin, was attacked with hydrargyria: when the eruption began to give way, a blue pill was prescribed night and morning, and the bubo got well without the affection of the skin being aggravated.

In the *febrile* and *malignant* species of hydrargyria, nothing could warrant the continuance of mercury in any form. By abandoning its use at once, an attack of hydrargyria, which commenced with violence, has occasionally been disarmed of its formidable aspect; the neglect of this simple precaution, on the contrary, has in some unfortunate cases, rendered the most energetic subsequent treatment unavailing in warding off a fatal termination. Like salivation, hydrargyria once established, seems to have a kind of necessary course to run. Pearson and Alley, therefore, agree in believing that though the more painful symptoms of the affection may be soothed by appropriate remedies, yet that no treatment is adequate to check it in its progress.

In hydrargyria *febrilis* and hydrargyria *maligna*, cold ablution or sponging, allays the distressing sense of heat which attends the eruption. The tepid or cold bath is also extremely useful when the condition of the patient does not prevent its repetition at short intervals. One of Spens' patients found the warm bath extremely soothing; but it could not be repeated on account of the syncope it produced. Next to frequent immersion in cold or tepid water, purgatives are the best means of diminishing the excessive heat of skin which accompanies hydrargyria. Crampton was in the habit of ordering powder of jalap combined with some of the neutral salts; Spens' medicine was the electuary of senna with an equal quantity of sublimed sulphur; Alley believed the super-tartrate of potash a preferable purgative to either of these formulæ. Mercurial purgatives ought, of course, to be avoided.

When the pulse is full and frequent, blood ought to be taken away, especially when any bronchial affection complicates the mercurial diseases. Alley saw one patient lost through want of recourse to this measure. The mercurial pulmonary affection, however, will also frequently be found to yield to purgatives.

Blisters are occasionally indicated, and may prove useful; but

(a) Mr. Colles, in his large experience, only saw one case in which the fever lasted more than eight days.



some practitioners are afraid to resort to these upon surfaces so highly inflamed and covered with vesicles, as they are in hydrargyria.

Those cases in which the tartrate of antimony might prove a useful medicine, have not been well determined.

The thirst is best allayed by acidulous drinks.

Pearson recommends opium to procure sleep, lessen pain, and check the diarrhoea, which almost always occurs during the secondary fever. Opiates and Peruvian bark are occasionally exhibited along with some generous wine during the continuance of the purulent discharge in hydrargyria *maligna*.

To prevent the absorption of the discharge into the system, and to promote the formation of a new epidermis, some drying powder, such as finely powdered charcoal, and liniments containing lime-water, have been advised. Alley was no advocate for any form of topical application containing lead.

To recapitulate, cold lotions, tepid baths, bland diet, purgatives and opium are the usual remedies in hydrargyria; blood-letting and tonics are only required in the severer, and happily the rarer, cases of the disease. (a)

#### *Historical Notices and particular Cases of the Disease.*

363. Among the writings of Th. Bonetus,<sup>1</sup> and in those of B. Bell,<sup>2</sup> several passages occur that evidently refer to hydrargyria. Jussieu<sup>3</sup> mentions an eruption of pustules affecting the skin of the workmen employed in the quicksilver mines of Spain. Cullerier,<sup>4</sup> and M. Lagneau<sup>5</sup> seem to refer to hydrargyria under the title of *erysipelas caused by mercury*.

The medical practitioners of Dublin having had the most frequent opportunities of studying this disease, their writings, and especially the works of Alley, have supplied the greater part of the information here laid before the reader. Dr. Burrowes, Physician to the House of Industry, Dublin, the late Dr. Gregory, Professor of the Practice of Medicine in the University of Edinburgh, and Mr. Dease, Professor of Surgery to the Royal College of Surgeons in Ireland, were the first who recognized mercury as the cause of this disease, to which Dr. Stokes, of Dublin, called the attention of his pupils during his course of 1798. Dr. Alley<sup>6</sup> was the first who published a good special treatise on the affection. Three months after the appearance of this publication, Dr. Moriarty<sup>7</sup> gave the results of his own and of Dr. Whitley Stokes' experience in the disease, which he describes under the title of *Mercurial Lepra*. Dr. Thomas Spens, in the Edinburgh

(a) "With respect to local treatment, I believe," says Mr. Colles, "that dusting the excoriated parts with any of the mild drying powders, will be found to afford as much relief as any other application. Sometimes the application of cloths, wetted with the black wash, has procured relief, and has appeared to promote the formation of cuticle. In a very severe case it will be necessary to have the sheets in which the patient is laid prepared so as to prevent them from sticking to the skin; I think that this is very effectually done by a mild ointment of rather a stiff consistence. The common one, made of equal parts of suet and beeswax, spread as thin as it can be spread by holding the spatula on its edge, will answer extremely well. I do not pretend to say that some other composition may not be discovered which will better promote the healing of the excoriated surface, but whatever it be, I should recommend it to be made of a firm consistence, for the softer ointments, by the heat of the body, are found to run quickly through the sheets, and consequently to leave the surface which is applied to the body nearly dry.

"I may next remark, that an obvious amendment takes place in the symptoms of the venereal disease, on the first appearance of this eruption, and that in a degree more striking than that which attends so slight a degree of pyalism."

<sup>1</sup> *Médecin. septentrion.*, vol. ii. p. 384, folio. Genève, 1634—1636.

<sup>2</sup> *Treatise on the gonorrhœa virulenta*, etc., vol. ii. p. 227, 8vo. Edinburgh, 1793.

<sup>3</sup> *Mémoires de l'Académie des sciences de Paris*, 1719.

<sup>4</sup> *Dictionnaire des sciences médicales*. Art. Mercure.

<sup>5</sup> *Exposé de la maladie vénérienne*, 8vo. 1818, 5 édit., p. 440.

<sup>6</sup> *An essay on a peculiar eruptive disease arising from the exhibition of mercury*. Dublin, 1804.—*Observ.* on the hydrargyria, or that vesicular disease arising from the exhibition of mercury. London, 1810.

<sup>7</sup> *A description of the mercurial lepra*. Dublin, 1804.

Medical and Surgical Journal, No. 1, 1805, and No. 7, 1806, under the name of *Mercurial Erythema*, gave three cases of the disease which occurred in the Royal Infirmary of that town. Dr. Mullins<sup>8</sup> published a translation of his inaugural dissertation defended at Edinburgh in 1805, in the same periodical. Dr. John Pearson<sup>9</sup> subsequently gave an exact description of the disease under the name of *eczema mercuriale*, or eruption produced by the use of mercury. For additional information on the disease, the writings of Jos. Frank,<sup>10</sup> and a variety of papers by Bacot,<sup>11</sup> Lawrence,<sup>12</sup> Crawford,<sup>13</sup> and Johnston,<sup>14</sup> may be consulted.

CASE LV.—*Hydrargyria occasioned by mercurial frictions*. Madame C \* \* \*, thirty-four years of age, came to Paris from the neighbourhood for medical advice, on account of an enlarged state of the lymphatic glands of the neck and abdomen, and a chronic gastric affection. Madame C \* \* \* was recommended by the practitioner she consulted, to rub in half a drachm of the strong mercurial ointment on the insides of her thighs every day. On the fifth day after this procedure was adopted, a very copious eruption of vesicles, each as large as a small pin's head, took place upon the upper and inner parts of the thighs. The skin in these situations was red, hot and extremely itchy. Next day the vesicles became confluent, the skin burning, and the legs stiff; febrile symptoms also set in, and the night was passed without sleep (*Cold baths, cold washes with decoction of althea, lemonade and broth for diet*). On the following or third day a plentiful discharge of yellowish serum took place from the parts affected; the greater number of the vesicles were ruptured, the patient having passed the night in tearing with her nails the districts of skin that were inflamed. Had not the patient been much reduced by the chronic affection of the abdomen, already of several months, standing, I should certainly have taken away blood at this stage. Under the circumstances, I was compelled to be satisfied with recommending the cold bath and emollient lotions. No incrustations were formed on the vesicles; the reddish serous discharge which was poured out abundantly for five days, was absorbed, by the cloths kept constantly applied to the parts. The continual use of the cold bath and the lotions undoubtedly prevented the parts from scabbing over. By the end of the second week the inflammation of the skin had disappeared, and nothing more than a pretty abundant furfuraceous desquamation then took place from the internal parts of the lower extremities. (a)

(a) An instance of the extreme susceptibility of the system to mercury, and to the production of hydrargyria occurs in the following case:

"Mr. R. applied to me, 12th August, 1813, for the cure of a chancre. I had treated him in 1810 for a similar disease, and was then made fully acquainted with his extreme tendency to mercurial erythema. Having premised a tepid bath, and some active purging medicine, I commenced by directing a pill of hydr. acet. gr. ss. and pulv. antim. gr. ij. to be taken every night. On the second day a slight rash appeared on the inside of his thighs; of course the mercury was withheld for a day. No improvement in the chancre attended this eruption. The pills were continued sometimes every day, sometimes every second day, (according to the appearance of the rash,) until the middle of September, when the chancre took an unfavourable turn, and showed a tendency to slough. Then the mercurial medicines were entirely discontinued. The rash having disappeared for four days, the state of the ulcer induced me to recommend the ordinary black wash (calomel and aq. calcis). This had been applied for one day only, when the rash reappeared, and with increased severity. On resuming the mercury on Oct. 3d, I directed hydr. acet. gr. ss., and extr. cicutæ gr. i. No rash appearing, the dose of the pills was doubled: the rash appeared on 11th Oct. After this the dose was cautiously increased to three, and ultimately to four pills per diem. The chancre was very slow in healing, but was completely healed on the first of November. The mercury was continued some

<sup>8</sup> *An essay on the erythema mercuriale*, 1805.

<sup>9</sup> *Obs.* on the effects of various articles of the materia medica on the cure of lues venerea. 2d edit., p. 167.

<sup>10</sup> *Prax. Univ. Med.*—*Acta clinica*, vol. iii. p. 22.

<sup>11</sup> *Lond. Med. Gaz.*, v. iii. p. 347.

<sup>12</sup> *Lond. Med. Gaz.*, vol. v. p. 742.

<sup>13</sup> *Edinb. Med. and Surg. Journ.*, v. xvi. p. 37.

<sup>14</sup> *Ibid.*, vol. xxxi. p. 169.



## SCABIES.

Vocab. *Itch, Psora.*

364. Scabies or Itch is an inflammatory affection of the skin, unaccompanied with fever, contagious, and characterized by an eruption of pointed vesicles, transparent on their summits, filled with a viscid and serous fluid, and constantly attended with pruritus. This eruption is liable to appear on every part of the body, but is seen more especially upon the abdomen, about the bends of the different articulations and between the fingers. I must say, however, that I have never seen itch affecting either the face or hairy scalp.

365. *Symptoms.*—When itch has been communicated, the party contracting the disease is sensible a few days afterwards of a slight pruritus in the parts which have been most immediately exposed to the infection. The pruritus is increased through the night by the warmth of the bed, and during the day by indulgence in spirituous liquors, spiced food, and by every cause that produces an afflux of blood towards the surface. A number of small spots or points, elevated, but in so slight a degree as scarcely to rise above the level of the skin, now make their appearance; this eruption usually takes place in children, four or five days after exposure to the contagion; in adults it appears from the eighth to the fifteenth or twentieth day, and in the aged and those affected with chronic diseases, occasionally, a month or more after the infection.

The vesicles of scabies appear first on the parts that have been immediately exposed to infection: the hands in tailors and dealers in old clothes, the breech in infants at the breast, &c. The eruption has at first a rosy red hue in the youthful and florid; but it more usually preserves the common colour of the skin, especially among valetudinarians. It spreads gradually to the parts in the neighbourhood of those on which it first appeared. The proper character of the eruption soon becomes apparent,—small acuminated vesicles are perceived upon every red point. If the vesicles be few in number, they occasion but little pruritus, and long preserve their primary form. If, on the contrary, they be very numerous, the skin between each participates to a certain extent in the inflammation, and the pruritus is greater and less endurable. The vesicles are then most usually torn by the nails, and allow their viscid, serous contents to escape, which, concreting, form small thin scabs, flimsy in their texture and but slightly adherent to the skin. Should the patients have used considerable violence in scratching, the scabs are black and analogous to those observed in prurigo.

In the sanguine and robust, and those addicted to the use of stimu-

days longer, although a slight return of the rash again obliged us to desist for a day occasionally. During this lengthened course of mercury Mr. R's general health continued good. No ptyalism was induced; the gums were not made sore, but the inside of the cheeks assumed a leaden colour, and became a good deal swollen during the last fortnight of the treatment.

“Mr. R. gave me the following account of the effects of mercury on his system. Previously to the year 1806, he had used mercury for cure of a chancre, and did not then experience any but the ordinary effects from the use of this medicine. In 1806, he again had occasion to use it for cure of a chancre, and then he employed it both internally and externally in very large doses. On this occasion it did not affect his mouth; but immediately after he had laid aside the medicine he was attacked with mercurial erythema, which affected him in a very severe and dangerous degree. Since that period (and never before) he has experienced an extreme susceptibility to the action of mercury in producing this rash; for example, a very small portion of mercurial ointment rubbed on the pubes, for the purposes of cleanliness, has more than once produced it. A grain of calomel combined with purgatives has had the same effect.

“In this case I would remark, that the venereal symptom did not improve on the appearance of the rash as it does in less susceptible constitutions. The mercury had not the effect of producing ptyalism, though used for such a length of time. The effects of the topical application of black wash affords the strongest proof of the great susceptibility of this individual.” (Mr. Colles *ut supra*.)

lants, itch, if left to itself, by spreading till almost the whole surface of the body is infected, may give rise to symptoms of considerable severity: the vesicles become more and more violently inflamed, and acquire at length the character and appearance of true pustules (scabies *purulenta*, Bateman); boils, and *accidental* pustules, like those of *ecthyma*, are also occasionally developed in their interstices, under these circumstances.

366. In southern climates, during the spring and summer seasons, in youth, and among individuals of a sanguine and robust constitution, the vesicles of scabies run rapidly through their periods when they are not torn by the nails; their progress is slower in the north, during the winter and autumn, and among the aged and infirm.

Scabies is a disease which left to itself never gets well: it might continue through the lifetime of the individual who should neglect all means for its cure. Its usual duration is from twelve days to a fortnight, when it is properly treated. Occasionally, it may be seen disappearing for a few days under the influence of some intervening acute disease, without the symptoms of the latter being sensibly modified by the circumstance. Sabatier mentions the case of a man labouring under an old and well-marked itch, in whom the vesicles, without any kind of treatment, sank and disappeared on his being attacked with inflammation in both lungs, nor did the eruption appear again until a fortnight after this disease began to yield, and when convalescence was already well established. On the other hand, Rammazzini, Testa, and several others, tell us they have seen hematuria, affections of the heart, and several other serious diseases, follow *retrocession of the itch*. I have not myself met with any similar occurrence, and such cases must be very rare.<sup>1</sup> From a superficial study of symptoms, and the inherent deficiency of our medical nomenclature, consequences have been attributed to the disappearance of itch, which are owing to the retrocession of true eczematous eruptions described under the name of *scabies*.

367. Scabies may be complicated with other cutaneous diseases, and its diagnosis thus be occasionally rendered obscure. Yet is it seldom that other vesicular eruptions are met with on the skin at the same time as itch. When *ecthyma* occurs along with scabies, it is almost always after the employment of stimulating washes or unguents. I have, however, seen vesicles similar to those of *eczema*, and true vesications like those of a blister, on the backs and palms of the hands, when these happened to be the seat of a large crop of scabious vesicles. It is almost always with *papular* eruptions that scabies is complicated. When the vesicles of scabies are widely and plentifully disseminated in a young and hardy individual, they often occasion the development of a lichenous eruption, the papulæ of which are either separately scattered or collected into clusters. Prurigo is also occasionally evolved among subjects who have long suffered from scabies; a circumstance which has given rise to the erroneous supposition that itch occasionally degenerates into a papular disease. When the irritation of the skin becomes excessive, pustules of *ecthyma*, and even furuncles may be seen associated with the vesicles of scabies.

Scabies, when it is extensive and severe, and has continued for a very long time, is now and then seen accompanied or followed by an inflammation of a portion of the mucous membrane of the gastric and pulmonary passages.

In individuals labouring under diseases of the digestive organs or lungs, who contract scabies, the vesicles are flaccid, and either decline or die totally away, when the primary diseases get worse or are temporarily aggravated from any cause,—errors in diet or otherwise.

368. Scabies is scarcely modified in its course by *scrofula* or *sypilis*. In unhealthy subjects the vesicles assume a livid hue, and when they appear congregated in large numbers in particular regions, they are there often seen complicated with *ecthyma cachecticum*.

369. *Causes.*—Scabies is one of the most universally disseminated contagious diseases known; the most momentary contact of the fluid secreted by its vesicles is enough to communicate the infection; it is observed in every climate, during every season of the year, attacking all ages, and persons in every rank of life, without discrimination. It is most commonly observed, however, among the poor and wretched,

<sup>1</sup> Dr. Hahnemann, the noted head of the Homœopathic school, and his disciples, are of a different opinion; they seem to ascribe nineteen in twenty of the ills that flesh is heir to, to *latent psora* in the constitution.—R. W.



and those who are negligent of cleanliness. When it does appear in the families of the affluent, its importation may generally be satisfactorily traced. Sailors, soldiers, work-people, and those who are crowded together in manufactories, prisons, barracks, hulks, &c., are very frequently affected with this disease. Itch is neither an endemic nor an epidemic disease in the usual sense of these words: it is not propagated by causes peculiar to the climate, nor to the situation where it appears; it spreads by the mere effects of contact and want of cleanliness. All tends to show that those *epidemic scabies* of which Frederic Hoffmann and several other writers have spoken, were vesicular eruptions referable to distinct and different genera.

Some pathologists, among others Fabricius Hildanus, Lazarus Riverius and Pringle, have supposed that scabies might be spontaneously developed under particular circumstances, and as *crises* in several acute and chronic diseases. They would persuade us that patients who had long suffered from severe affections, have been cured by the spontaneous appearance of this eruption. I have never met with any instance of this kind; and we may, perhaps, be allowed to suppose that certain vesicular and papular eruptions, such as eczema and lichen, were mistaken for itch, in times when the distinguishing characters of the different diseases of the skin were not very generally known.

Several instances of itch, transmitted from animals to the human species, have been cited; but the greater number of the diseases to which veterinary practitioners have given this name (ox-itch, horse-itch, dog-itch, hog-itch, &c.), are very inaccurately described, and many of the cases of these affections which have been shown to me, analogous to lichen and eczema in their external characters, have still left me in great doubt as to their actual nature; and although their transmission be an asserted fact, which cannot be positively denied, neither can it be satisfactorily demonstrated. M. Mouronval instances several cases, in which the itch was communicated from the dog to the human kind. On the other hand, that skilful veterinarian M. Leblanc, showed Messrs. Sabatier, Littré, and myself, several dogs labouring under the disease called itch, in which we could distinguish a number of small acuminate vesicles, perfectly analogous to those of scabies in the human kind, upon the upper and inner parts of the thighs and various other regions of the body, calling our attention to the fact, that the man by whom these animals were rubbed and tended had not contracted any disease, not only in the present instances, but in many preceding ones; whilst a dog, from having slept on some of the straw which had littered one of the mangy brutes, was seized shortly after with the same disorder.

340. Several authors of modern times, have reported that they had discovered an apterous insect, almost invisible to the naked eye, within the vesicles of scabies, which they have described under the name of *acarus scabiei*. Ingrassias and Jobertus hint at the existence of such an insect; but it is in the *Theatrum Insectorum* of Mousset that it is mentioned with a few particulars for the first time. Hauptmann was the first who published a figure of one of these acari, drawn from nature, as he says, and represented with six feet. Additional observations by Redi seemed to put the existence of this insect beyond doubt: "Whilst under your auspices and led by your views, I was engaged in making experiments on insects, I saw by accident, that the *cirio* was a very small worm, formed under the skin of those affected with scabies, whose bite occasioned extreme itchiness. Having since found, that Giuseppe Lorenzo had adopted the same opinion, I was curious again to examine the fact myself. I communicated my purpose to M. H. Cestoni, who informed me he had several times seen poor women, whose children were affected with itch, draw out, upon the point of a pin, from the smallest pustules, before they were ripe and purulent, a *something*, I know not what, which they crushed between their nails with a slight noise; and he added, that at Leghorn, the galley slaves perform the same kind of office for each other. He says, he does not know for certain, that these *cirros* are actually worms. We, therefore, resolved in common, to satisfy ourselves on the matter; and having applied to a person labouring under the itch, we requested him to point out to us, the parts in which he experienced the most troublesome pruritus. He showed us a number of pustules not yet purulent. One of these I opened with the point of a fine needle, and after squeezing out a little of the

fluid it contained, I drew forth a small white and almost imperceptible globule. This globule we next examined under a microscope, and we found, with all possible certainty, that it was a worm; the form of which, resembled that of a tortoise, of a whitish colour, the back rather of a dusky hue, and furnished with a few very fine hairs; the little animal moved with great vivacity; it had six legs; the head was pointed and armed with two small horns or antennæ, at the extremity of the mouth. Not satisfied with this first observation, we extended our researches to a great many other individuals affected with itch, of different ages, sexes and temperaments, and at different seasons of the year, and always found animals of the same kind, and almost in every watery pustule,—I do not say *all*, for it occasionally happened that we could not find any.

"It is at all times extremely difficult to distinguish these insects on the surface of the body, on account of their extreme minuteness, and of the similarity betwixt their colour and that of the skin. They first insinuate their pointed head, and then move about gnawing and pushing till they have buried themselves completely under the epidermis, where we could easily perceive that they had a kind of covered way of communication between one point and another, so that the same insect occasionally produced several watery pustules; now and then, also, we discovered two or three, either together or very near to each other. We were very curious to learn whether or not these little animals laid eggs, and after much research, we had at length the satisfaction of being assured of the affirmative; for at the very time that M. Isaac Colonello had one of these *cirros* under the microscope to make a drawing of it, he saw a small white egg, scarcely visible, and almost quite transparent, extruded from the hinder part of the animal; it was of an oblong shape, like the egg of a pigeon. Encouraged by the occurrence, we again set about searching for eggs with the greatest attention, and we found many more at several different times; but we never again observed them issue from the body of the animal under the microscope. These *cirros* pass readily from one person to another by mere contact; for, being extremely active, and not always engaged in digging passages under the epidermis, these little animals are often upon the surface of the integuments, and are thus ever ready to attach themselves to whatever they touch, &c."<sup>1</sup>

Morgagni<sup>2</sup> informs us that he had himself made similar observations. "I had occasion," says he "to give my advice to a lady of high rank in my native place. After experiencing several crises towards the end of a severe and long-protracted illness, one completely scabious in its nature was added to the rest, which, coming on suddenly, spread over almost the whole body, but particularly to the palms of the hands, so that she could not sleep by reason of the pruritus. As the vesicles of which this eruption consisted, were filled with serum, and resembled those in which insects are discovered, I caused a servant to open one or two of them, and to take out any thing she might find, after pressing out the fluid, upon the point of a fine needle, and to deliver it to me for examination with some good glasses I had at hand. There was no necessity to look long; the animalcule was found alive, and of the very form which has been delineated by the more modern authors. I then took away another, and still another."

Morgagni<sup>3</sup> also reminds us that Abenzour and several other writers make mention of this insect. Linnæus speaks of it under the names of *acarus humanus subcutaneus*, and of *acarus scabiei*; but having subsequently thought that he perceived the most perfect resemblance between this insect and the cheese mite, he described them together

<sup>1</sup> Obs. sur les cirons ou insectes de la peau des galeux, under the name of Dr. Giovan Cosimo Bonomo, in a letter addressed to the Academy of Paris, in 1687. Published in their Collect. Académ. Etrangère, 4to. t. 4, p. 574, liv. iv., Epist. 55.

<sup>2</sup> De Causis et sedibus morborum, lib. iv., Epist. 55.

<sup>3</sup> "Sunt enim syrones, inquit Abinzoar, pedicelli, Arabibus assoabat dicti, qui subter cutem et ad manus, et crura serpunt: pustulas quoque aqua plenas sub cute, ubi delitescunt, excitant: qua dissecta, prorepunt animalcula tam parva, ut vix visus, quamvis perspicaci, ægre deprehendi possint (J. Langius. Medicinalium Epistol. Miscell., lib. ii. Epist. 42.) Formam quoque ipsorum alius antea fuisse microscopii auxilio non incognitam, cum Borelli observationes indicant a Valschio (Exercit. de vena medinensi), commemoratæ secundum quas syrones testudinum effigies repræsentarunt, tum præsertim Etmølleri illa confirmat syronum observatio quæ Lipsiæ i Actor. Erudit. volumine (A. 1682. M. Sept.) proposita, præterquam alios nominat qui prius viderint, animalcula ipsa sic descripta exhibet, et delineata, ut descriptio, et pictura perfectiores quidem paucis post annis reddi potuerint, sed tanquam novæ prorsus in medium proferri non potuerint." (Morgagni. De Sed. et Caus. morborum, lib. iv., Epist. 55, § 4.)



as mere varieties of one species. De Geer,<sup>1</sup> on the other hand, both in his descriptions and his figures, which are extremely accurate, left no doubt of their generic difference. The existence of the *acarus scabiei*, however, having been called in question, M. Galès,<sup>2</sup> after citing the older observations that had been made upon it, and quoting the more recent authorities of Wichmann<sup>3</sup> and Waltz<sup>4</sup> for its existence, commenced a series of inquiries into the subject in 1812, and assured the world that he had seen more than three hundred specimens of the *cirio* or *acarus* of scabies, which always presented the same form, though not the same number of legs, there being sometimes six, sometimes eight—a variety which he ascribed to variety of development. Many members of the Institute of France, and of the Ecole de Médecine were witnesses of these inquiries of M. Galès, so that the existence of the *acarus scabiei* was generally admitted as a fact. Subsequently, however, Galcotti and Chiarugi of Florence, Bielt, Lugol, and Mouronval of Paris, sought in vain, with powerful magnifiers, and excellent microscopes, for this insect, in a great number of individuals affected with scabies. I was not myself more fortunate than they, in all my endeavours to discover the *acarus*; and the ascertained absence of that insect, in numerous instances, in vesicles in which, if it existed at all, I had been led to expect to find it, as well as the perfect resemblance of the figures given by Galès to the cheese mite, induced me, along with many others, to deny the existence of the *acarus scabiei*. A more careful study of the previous inquiries on this point would have prevented our adopting the erroneous notion we did in regard to the seat of the *acarus*. Mouffet,<sup>5</sup> long ago, remarked that the *cirio* was not found in the *pustules*, but by their sides. Casal,<sup>6</sup> too, had already described the little burrows made under the cuticle by the insects, which are mentioned in the letter of Bonomo. Adams<sup>7</sup> indicates, with the utmost precision, the seat of the *acarus*, and the mode of finding it. Finally, M. Renucci, student of medicine, who had often seen the common people of his native country (Corsica), extract the insect of scabies, and who had himself extracted it repeatedly, very recently (August, 1834), showed the medical practitioners of Paris the mode of discovering it, extracting it before them, and giving them information on the subject almost identical with that which is to be found in Adams. Since this time the existence of the *acarus* is placed beyond a doubt; Messrs. Lemery, Gras and Renucci, each showed me the mode of discovering it, and I have myself extracted several from the skin of individuals affected with scabies. For more ample details on this subject, I beg to refer to the published account of M. Renucci's observations,<sup>8</sup> to the work of M. Raspail,<sup>9</sup> who has given an excellent description and very good figures of the *acarus*, and to the researches of M. Gras,<sup>10</sup> who has made many experiments with the view of determining the share which the *acarus* really has in the production of scabies. (a)

(a) Mr. Wilson (*op. cit.*) records some of these experiments, which may be appropriately enough be introduced in this place.

"Exp. 1.—'On the twenty-eighth of August,' writes M. Gras, 'in the presence of several physicians and students, I placed two living acari on the middle and anterior part of my forearm, and covered

<sup>1</sup> De Geer. Mém. pour servir à l'histoire des insectes. Stockholm, 1778, in-4to. t. vii. p. 92 et pl. 5.

<sup>2</sup> Galès. Essai sur le diagnostic de la gale, sur ses causes, etc. in-4to. Paris, 1812.

<sup>3</sup> Wichmann (Johann Ernest). *Ätiologie der Kraetze*. Hanover, 1786, in-8vo.—*Ibid.*, 1721, in-8vo.

<sup>4</sup> Waltz (G. H.). *De la gale de mouton*, trad. de l'allemand. Paris, 1811.

<sup>5</sup> Mouffet. *Theatrum insectorum*. London, 1634, in-fol.

<sup>6</sup> Casal (Gaspard). *Historia natural y medica del principado de Asturias*. Madrid, 1762, in-4to.

<sup>7</sup> In looking for the insect of scabies, Adams informs us we must not examine the vesicle; but if a line, about a quarter of an inch in length, be seen going off from one of its sides, and at the extremity of this a reddish and in appearance dry and firm elevation be discovered, it is here that with the assistance of a good magnifying glass, the insect may occasionally be found; it is at all events the only place in which it is ever to be expected. (On morbid poisons, p. 299, 4to. London, 1807.) Adams, in mentioning Bonomo, who says he took the insect from the moist vesicle, justly remarks that this assertion renders all his observations suspicious. Adams has given two good figures of the *acarus*.

<sup>8</sup> Gazette des hôpitaux, Paris, 1834.—Gazette médicale, in-4to. Paris, 1834.

<sup>9</sup> Raspail. Mém. comparatif sur l'histoire naturelle de l'insecte de la gale. Fig. in-8vo. Paris, 1834.

<sup>10</sup> Gras (Albin). *Recherches sur l'acarus ou sarcopte de la gale de l'homme*, in-8vo. Paris, 1834.

If, therefore, there be no longer any doubt of the fact that in almost all who are affected with scabies, and who have as yet been subjected to no kind of treatment, a certain number of sub-epidermic furrows containing acari are to be discovered, it is also indubitable that the number of these furrows and of these insects bears no proportion to that of the vesicles. It is, farther, rare to discover these insects on the abdomen and on the groins, where the eruption of scabies is nevertheless very common and very apparent; moreover, scabies is known to continue when no more acari are to be discovered. Lastly, the experiments instituted for the specific purpose of ascertaining whether the *acarus* is truly the *artisan* of the itch, do not appear to me altogether conclusive on the subject.

The *acarus* will be described in the appendix along with the other parasitic animals infesting the human integuments.

371. *Diagnosis*.—The diseases which are most apt to be confounded with itch are eczema, lichen, prurigo, ecthyma, and certain artificial vesicular and papular eruptions.

When scabies occurs alone, and a sufficient number of its vesicles remain unbroken, it is easily distinguished from the *papule* of lichen and prurigo, and from the *pustules* of ecthyma.

Eczema simplex has a greater resemblance to scabies, inasmuch as the general elementary characters of both are the same; but they differ in many essential particulars, and especially in the non-contagious qualities of the vesicles of eczema, which, moreover, are more highly inflamed, and flatter than those of scabies. The diagnosis of these diseases is not so easy, when the vesicles have been destroyed; for if the small and slightly adherent scabs of the itch are very unlike the incrustations of ecthyma, intimately connected with the skin as they are, and the dry or humid excoriations of chronic eczema, they

them with a watch-glass kept in its place by a bandage. On removing the apparatus on the thirtieth, we found two superficial cuniculi (sillons) half a line in length, and at their extremity two little white points, indicating the presence of the acari. Substituting a fold of linen, retained in its place by a piece of adhesive plaster, for the watch-glass, the acari were left undisturbed for six days longer. At the end of this time the white points were no longer perceptible, and the cuniculi having become obliterated, had disappeared.<sup>1</sup>

"Exp. 2.—'On the first of September, I placed seven living acari on my forearm, and covered them with a fold of linen, and piece of diachylon plaster. Four days after, we found four or five well-marked cuniculi. On the sixth of September, two of the acari being extracted from their cuniculi, were found active; they were then replaced. On the twelfth, another animalcule was removed and examined; it was quite lively. On the fourteenth, there was considerable itching, with the development of a vesicle; the cuniculi were two lines long. On the sixteenth, there were several new vesicles near to the cuniculi, but not on their line. On the seventeenth, the vesicles of the previous day had been rubbed off by the linen, but two or three new ones were visible. On the following day I put an end to the experiment, by rubbing some sulphuro-alkaline ointment into the part. During the course of the experiment, I suffered pruritus from time to time.'

"Exp. 3.—'On the ninth of the month, I imprisoned six acari on my ring finger, by means of the finger of a glove. Next day there were two cuniculi half a line long. The *acarus* of one of these burrows was apparent for ten days, the other for three weeks, but after this period they both disappeared. During this interval, I cauterized several suspicious vesicles developed on the same finger, and discovered two new cuniculi originating in acari that had fixed themselves without having been observed. None of the vesicles showed themselves on the line of the cuniculi.'

"Exp. 4.—'I lately placed nine acari in the bend of my left arm, and retained them there by a compress and bandage. Four hours after, I felt considerable pruritus, and the next day perceived four cuniculi. Several days after, some vesicles showed themselves on my forearm.'

"Exp. 5.—'Having placed two acari in the flexure of the elbow of two persons, who expressed their willingness to submit to my experiments, on one, three or four vesicles were apparent on the fifty day, and were accompanied by severe itching. On the other there are two cuniculi, with pruritus, but no vesicles.'"



differ but little from the smaller sized scabs of prurigo, and from those produced by pricking the integuments about the wrists and between the fingers, as is occasionally done by prisoners to simulate the disease of which we are now speaking. Lastly, when scabies has been treated by irritating lotions or unguents, which have produced adventitious eruptions, or when the disease is accompanied with large yellow pustules (scabies *purulenta* Batern), and when the vesicles which characterize it are altered in their nature, and the small scabs which succeed them are mingled with accidental pustules and papulæ, it is only by a careful and minute study of the form and seat of the various alterations presented by the skin—*vesicles, papulæ, pustules, scabs, excoriations, &c.*, that we succeed in ascertaining the number, the nature, and the importance of the different lesions, which together, constitute these complicated cases.

372. *Prognosis*.—If scabies be a much milder disease than is generally imagined, still it very rarely happens, that its appearance exercises the salutary influence on certain acute and chronic complaints, which has been ascribed to it by certain writers.<sup>1</sup> It is still less positively ascertained that its cure, when this event has been followed by untoward symptoms, has actually proved their cause. It is, however, possible, that a severe and old standing scabies, in individuals of weakly constitution, and affected with diseased viscera, may in some sort modify or check the progress of this internal malady; in such cases, it would only be advisable to seek the cure of the scabies in a very gradual manner, and after having established some other species of counter-irritant or drain, in a different district of the skin. On the other hand, I have often had no difficulty in perceiving that unpleasant consequences have been attributed to the discussion of itch, which have truly been due to the disappearance of eczematous and lichenous eruptions, improperly designated under the name of scabies.

373. *Treatment*.—In old standing cases of scabies, when the vesicles appear crowded together in great numbers, and are attended with violent inflammation of the skin, or with adventitious eruptions, it is advantageous, if the constitution will admit of such practice, to begin the treatment by a bleeding from the arm, by soothing lotions, and occasionally by simple baths. But when the disease is uncomplicated and of recent date, its cure is easily obtained without any preparatory steps by local means, of which experience has proved the general efficacy.

Frictions with the sulphur ointment (R. Adipis suil. lb. 1; Sulphur. sublim. lot. 3viii); or with this ointment, combined with sub-carbonate of Potash (R. Adipis suil. 3i; Sulphur. sublim. drm. ii; Potassæ subcarb. drm. i); or with the powdered sulphuret of lime, usually accomplish the cure of scabies within a fortnight. The sulphur ointment may be used in doses of two ounces daily, being rubbed morning and evening, over the whole of the parts affected with vesicles, so long as any remain visible. When the compound sulphur ointment is used, and it is the one I generally prefer, the patient's skin must be well cleansed with soap and water, after which, one ounce of the ointment is to be diligently rubbed during half an hour over the whole surface of the body. The rubbing is to be repeated at mid-day, and again before the patient lies down for the night, the treatment being continued on the following days in the same manner. In this way patients are often cured on the second or third day, and a very large proportion before the seventh. The course of friction is to be wound up with a warm bath, and an abundant use of soap to cleanse the skin.

Helmerich was in the habit of prescribing four ounces of the compound sulphur ointment in eighteen hours, and repeating the same quantity next day.

Such repeated inunctions have unquestionably the advantage of destroying the contagion rapidly, but they have the inconvenience of frequently causing artificial vesicular and papular eruptions, which compel us to suspend our treatment. Helmerich's plan is nevertheless the best when our object is the speedy recovery of a great number of individuals affected at the same time, and who, from their situation, are necessarily much in contact, such as soldiers, prisoners, the members of a large family, &c. I usually recommend the same plan to

the work people and artisans who apply as out-patients at the Dispensary of the Hôpital de la Charité. I occasionally employ sulphureous baths in conjunction with the compound sulphur ointment, and find the plan extremely efficacious.

In the plan of Pyhorel it is enough to add half a drachm of the sulphuret of lime to a little olive oil, and with the mixture to rub the palms of the hands during a quarter of an hour night and morning. Obstinate cases of scabies are by this means generally cured at the twenty-fourth or twenty-fifth friction. I, however, greatly prefer to this partial method of inunction, the plan by which the specific is applied directly and at the same time to the whole of the affected surfaces.

Artificial or natural sulphureous baths are particularly applicable in the cases of children, but the treatment carried on with these alone is expensive, twenty baths at least being required to accomplish the cure. Sulphureous washes, particularly one composed according to either of the following receipts: R. Potass. sulphuret. 3i; Aqu. lbs. iij; or R. Acid. hydrochloric. (muriatic) 3i; Aqu. distil. lb. i; an ounce of one of these mixtures added to four ounces of warm water and applied to the affected parts usually effects a speedy cure. These washes do not soil the linen and clothes of the patients like ointments; but they prove irritating to the skin of many persons, causing vesicular and papular eruptions which occasionally require bleeding and the warm bath before they are subdued.

*Alcoholic saponaceous washes* are less certain in their effects than sulphureous frictions and lotions, and may occasionally be recommended to the wealthy who are anxious to conceal the nature of their malady, or who show a repugnance to the use of sulphur in any of its forms or combinations: I make use of them but rarely.

*Sulphureous fumigations* which are employed in some hospitals are not attended with expense, leave no unpleasant smell, and do not soil the linen; but the long continuance of the treatment necessary to relieve the disease, more than counterbalances these generally insignificant recommendations.

I cannot enter into any long details concerning the method of treating complications of scabies with eczema, prurigo, lichen, ethyma, &c. Each of these diseases of the skin requires appropriate remedies, which either have been or will be made known in the course of this work. When such complications appear at the beginning of the disease, it is a good plan to use the simple and the sulphureous bath alternately; if taken every day, the latter might increase the concomitant affections, an effect which I have frequently observed when they were administered on account of varieties of scabies. When these diseases, or other artificial inflammatory affections of the skin, are set up towards the end of the treatment, we must be on our guard against taking such adventitious affections for *modifications or degenerations* of scabies: they would only be made worse by persevering in the use of sulphureous remedies.

When the vesicles of scabies have been made completely to disappear, we must take measures against their return. With this view the clothes of the patient, especially those that are of wool, must be disinfected by exposing them to the fumes of the sulphureous acid gas; the linen should be changed frequently, and the greatest attention paid to general cleanliness.

375. Having now made known the most successful and economical methods of treating scabies, I shall only say further in connection with the curative plan, that the inunction of oil, as recommended by M. Delpech, is less efficacious than the preparations of sulphur; and that the use of various *acid ointments and washes*, the bases of which are nitric acid and mercury, recommended for the cure of scabies, have occasionally produced salivation and disturbance of the digestive organs. A sulphuro-saponaceous liniment, (a) which has also been praised as effectual, I have seen followed by sweating, smarting, general uneasiness, and the development of artificial vesicular and papular eruptions. In fine, many other preparations such as the

(a) R. Potassæ sub carbonatis 3ij;  
Aqua 3i;  
Oleæ olivarum 3ss;  
Camphor. gum. 3ij;  
Sulphuris sublimati 3v;  
M.

<sup>1</sup> Jerzemska. De scabiei salubritate in affectibus hydropicis. Halæ, 1777.—Lepecq-de-la Cloture: Collect. d'observ. sur les malad. épidémiques, 4to. Rouen, 1778, t. ii. p. 394: "Phthisis guérie par l'inoculation de la gale."



proto-ioduret and the deuto-ioduret of mercury, have appeared to me rather injurious than beneficial in this disease. I conclude by stating, that I have found the plan recommended by Helmerich, which I usually follow, to be the safest and most efficacious of all. (a)

### Historical Notices of the Disease.

376. It has been said and repeated again and again, that the Greeks described the disease we call itch, under the name of *ψωγα*. This assertion is incorrect. By this word they designated scaly diseases in a general way, and by no means a *vesicular eruption, susceptible of transmission by contagion*. I should also state, that if in works published in the Latin language since the revival of letters, the itch is designated under the name of *scabies*, and this denomination is even applied to the disease in this place, the word was not used originally in the sense now attached to it. The description in which Celsus makes use of the term *scabies*, is much more applicable to confluent and excoriated lichen than to itch. "*Scabies verò est asperitudo rubicundior ex quâ pustulæ oriuntur, quædam humidiores, quædam sicciores. Exit ex quibusdam sanies, fitque ex his continuata exulceratio pruriens, serpitque in quibusdam citò. Atque in aliis quidam ex toto desinit, in aliis verò certo tempore anni revertitur. Quò asperior est, quòque prurit magis, eò difficiliùs tollitur; itaque eam quæ talis est *ὑγίαν* id est *feram*, Græci appellant," etc. There is no mention whatever in this obscure passage of an essential character of itch, which could neither have been overlooked nor omitted, namely, its *contagious nature*; further, itch never terminates spontaneously. It does not recur at certain periods of the year, and so on. In no other way, therefore, but by interpreting this passage amiss, can it be maintained that Celsus knew and had described the itch. Galen, under the title *ψωγα*—translated into the Latin, *scabies*—describes several squamous alterations of the skin, especially of that of the eyelids. There is nothing to authorize the assertion, that this writer was acquainted with the vesicular disease termed *itch* in England, *gale* in France; for if, in the following passage from the treatise *de pulsuum differentiis*, lib. iv. cap. 1, "*sed ut psorâ et lippitudine qui proprius accidunt, quidam corripuntur inviti*," it be said that *psora* may be transmitted by contagion, in connecting it with *lippitudo*, the author makes us suspect that he was discussing a disease of the eyelids, and not an eruption scattered over the fingers, wrists, bends of the arms, axillæ, &c.; and in the passages particularly devoted to the history of the different species of *psora*—rendered *scabies* by the translators—not one of them is mentioned as contagious.<sup>1</sup>*

In the Latin translations of Avicenna the word *scabies* where it occurs, does not seem applicable to the *itch*. Avicenna does not speak of contagion; he says, however, "*Et non accidit plurimum nisi inter digitos, quia sunt debiliores.*"

Guy de Chauliac is the first who points out the essential character of itch in an unequivocal manner: "*Scabie*," says he, "*est une maladie contagieuse.*" Fernelius and Paré, less accurate in their descriptions, have omitted this important feature of the disease, of which, however, Vesalius, Forestus and Van Helmont have taken notice.

Among the numerous diseases of the skin, which Hafenreffer<sup>3</sup> comprises under the title *Scabies*, he does not describe *itch*.

Willis does not separate it with sufficient care from other pruriginous affections, but he was perfectly aware of its contagious nature, and of the value of sulphur in its cure.<sup>4</sup> Willan and Bateman<sup>5</sup> have

(a) In general, it will be most prudent to administer sulphur internally, in conjunction with bitartrate of potassa, or the sulphuret of potassa, with a neutral salt in solution—at the same time that sulphur is used externally. I have cured scabies by blue mass and laxatives without recourse to sulphur in any form. Camphor dissolved in oil, in the proportion of one drachm to an ounce, answers, as we learn from Mr. Wilson, every purpose of eradicating the disease.

<sup>1</sup> Novus index in omnia quæ extant Cl. Galeni opera. fol. Basilæ, 1562—Art. Psora, Scabies.

<sup>2</sup> Des signes de scabie, c'est-à-dire rogne, trad. du Guidon par J. Canappe, 8vo., p. 358. Lyon, 1609.

<sup>3</sup> Πανόσχων ἀνολοδερμασιν, Tubing. 12mo., 1630.

<sup>4</sup> Pharmac. rational, part i. § iii. cap. 6.

<sup>5</sup> A practical synopsis of cutaneous diseases, 8vo., 7 édit. 1829.

very unnecessarily multiplied the species of this disease. M. Fourrier<sup>6</sup> has given a detailed history of the various methods of treatment, and Bielt<sup>7</sup> has devoted himself to demonstrating its constantly vesicular primary form. M. Mouronval has collected a great number of particular cases, and has given the results of his experience on the majority of the curative plans which have been proposed, especially on the effects of fumigations and alcoholic lotions; as also an account of the researches of M. Lugol on the *acarus scabiei*.<sup>8</sup>

M. Hurtel d'Arboval<sup>9</sup> has collected some observations on the itch of domestic animals; but these are still very imperfect.

Observations or cases of *simulated* itch have been published by M. Fabre,<sup>10</sup> and remarks on the *repulsion* of this disease<sup>11</sup> and on different methods of treating it, as by the liniment of the sulphuret of lime,<sup>12</sup> the compound ointment of sulphur and subcarbonate of soda,<sup>13</sup> the use of oil alone,<sup>14</sup> or the chlorate of lime,<sup>15</sup> the root of the plumbago europ,<sup>16</sup> &c., may be found considered in separate treatises, and various periodical publications.

### MILIARIS SUDATORIA, VEL SUDOR MILIARIS.

#### Vocab. Miliaria, Sudor. [Sudatoria.]

377. Sweating miliaria is an eruptive and contagious febrile disease, which almost always appears as an epidemic, and is characterized on the exterior by a copious and continued sweat, and, generally, by the eruption of small, rounded vesicles the size of millet-seeds.

The symptoms which precede or accompany the eruption may be complicated with those of other diseases; hence arise diversities in the severity, and a host of individual peculiarities in the character of the malady, which may, however, be regarded as assuming two principal forms, *mild* or *benign*, and *malignant* sweating miliaria.

378. When the disease appears in the milder form, the attack is often proclaimed by a feeling of lassitude, pain over the eyes, and loss of appetite; frequently, however, the patient is seized at once without any premonitory symptoms. In the epidemic which raged in the department of the Oise, in 1821, many individuals who had gone to bed well awoke labouring under the disease, their bodies bathed in sweat which never disappeared till their death or convalescence. Occasionally an almost imperceptible degree of fever, a burning heat, or a feeling as if a vapour were passing over the whole of the limbs, and still more frequently, a sense of constriction about the epigastric region, precedes by some hours, or by some minutes or seconds only, the appearance of the *sweat*, or rather the *hot vapour*, which, steaming from a few districts of the body at first, is soon exhaled from the entire surface. The mouth is clammy and the tongue is covered with a foul white, or, more rarely, yellowish fur. The inclination for food is gone, or is at least exceedingly moderate. The urine frequently preserves its natural characters. The bowels are usually confined during the whole course of the disease. The pulse is good in many cases, and only becomes frequent at the period of the eruption. The respiration seems troubled or oppressed in the same manner as it is in an atmosphere the temperature of which is excessively high. The encephalon and its dependences, the organs of sense, and those of generation, do not seem to be affected. This state continues with slight variations through the second, third and fourth days of the disease. It is on one of these days, usually the third, that after some slight sensation of tingling, a miliary eruption makes its appearance

<sup>6</sup> Dictionnaire des sciences médicales. Art. Gale.

<sup>7</sup> Dictionnaire de médecine, en 21 vol. Art. Gale.

<sup>8</sup> Recherches et observations sur la gale. 8vo., Paris, 1821.

<sup>9</sup> Dictionnaire de med. veter. Art. Gale.

<sup>10</sup> Fabre. Div. obs. de méd. et de chirurgie, 4to. Paris, 1834.

<sup>11</sup> Favarielle-Placal. Tableau des accidens funestes qui résultent du mauvais traitement de la gale et de sa répercussion. 8vo., Paris, 1807.—Wenzel. Des gales répercutées (Bull. des sc. médic. de Férussac, t. xii. p. 223).

<sup>12</sup> Journ. univ. des sc. medic., t. v.

<sup>13</sup> Méthode du docteur Helmerich pour guérir la gale en deux jours, publiée par J. Burdin, 8vo. Paris, 1822.

<sup>14</sup> Delpech. Revue medic., t. xiv. p. 149.—Avril, 1829, p. 114.

<sup>15</sup> Fantonetti. Arch. gén. médec., t. xxx. p. 407.

<sup>16</sup> Hallé. Expériences pour déterm. les propriétés et les effets de la racine de dentelaire dans le traitement de la gale. (Mém. de la soc. royale de méd., 4to. 1782.)



upon the skin, spreading from about the sides and nape of the neck, where it usually shows itself first, to the ears, the mamma in the female, the back, the insides of the arms, the abdomen, and the inner aspects of the thighs and legs. It may be evolved generally and rapidly, or partially and slowly, be circumscribed or progressive, come out suddenly or in succession, and be distinct or confluent. The vesicles which characterize this eruption are of the size of millet-seeds, pearly and diaphanous, and more distinct when the skin is put upon the stretch, and they are seen obliquely; they are also easily felt by the point of the finger. These vesicles are often intermixed with red and inflamed papulæ, which make the skin look like shagreen; lastly, true bullæ may appear accidentally on different regions of the body.

The duration of the vesicles individually, is from two to three days. They dry up and are followed by a desquamation of the cuticle greater or less in amount.

More constant in its occurrence than the eruption, the sweating is always copious, and accompanied with a peculiar odour,<sup>1</sup> which I have compared to that of rotten straw. The sweating begins with the morbid symptoms, and continues profuse during the whole course of the disease. It is not attended with any considerable heat of surface.

The whole of the symptoms decline by degrees, and disappear completely on the eighth, the ninth, or the tenth day.

2d. The *malignant* form of this disease appears to be induced by various concomitant and accidental circumstances: in one case it is a severe inflammatory affection of the stomach and intestines; in a second, true inflammation of the lungs, or of the bladder, which is set up; in a third, the *nervous* is the system which is implicated, and then we have delirium, coma, and convulsions, which speedily prove fatal. When the digestive organs are affected, the patient complains of an acute girding pain in the epigastric region; the spasm extends to the organs of respiration, and occasions the most distressing anxiety; the patients give vent to long-drawn sighs, complain of a sense of weight upon the chest, of a feeling of suffocation, of violent and unusual pulsations in the region of the stomach, synchronous with those of the heart, and of such general and indescribable uneasiness as makes them fear for the worst. These distressing symptoms occasionally appear in the very outset of the disease; they recur frequently during its course, and make their attack with particular violence on the third or fourth day, immediately before the appearance of the eruption. From the commencement of their illness, some patients suffer from vertigo and violent headache, complain of nausea, and make repeated efforts to vomit; or the countenance is flushed, the eyes are starting and injected, the temporal arteries throb, the pupil is contracted and immovable, and the patient sinks within a few hours, comatose, or convulsed. In other cases, a deep-seated pain in the chest, a diminution of its sonorousness, a crepitating rattle, or a blowing noise in one or several lobes of the lungs, oppression of the breathing, which is short and quick, frequency and fulness of the pulse, and sanguinolent expectoration, proclaim a concomitant inflammation of the lungs. Lastly, some patients complain of difficulty in passing their urine, and of deep pains in the hypogastric region, symptoms which, together with the high colour and deficient quantity of the excreted fluid, give unequivocal evidence of an inflammation of the bladder.

The malignant form of miliary sudor occasionally proves fatal within twenty-four or forty-eight hours; the disease occasionally runs its course within the week; more commonly, however, it does not terminate till after the lapse of a fortnight, and it may even extend beyond the third week.

<sup>1</sup> This odour has been likened by M. Menière to that of water slightly impregnated with chlorine, or to that of the evacuations of patients labouring under cholera. "The smell of rotten straw only struck him in those patients who were lying on indifferent bedding, of which an old palliase formed the principal part (Archives Génér. de Médecine, t. xxix. p. 100). I have, however, felt the peculiar odour in question very distinctly, from the persons of those patients who were laid on *very comfortable* beds, particularly from that of the Mayor of Cirès les-Mello. Other writers as well as myself have also said that it was *ascenscent*, and *very similar to that of rotten straw* (Schahl and Hesser). Lepeque-de-la-Cloture, says, that the sweat has a *rotten sour* smell (*aigre pourri*); others have characterized it as mephitic and insupportable (Pujol). It is certain, therefore, that the odour in these cases is always *peculiar* and very unpleasant.

Epidemic miliary sudor much more frequently occurs without any eruption than epidemic measles, scarlatina, or small-pox; the absence of eruption is indeed a much more frequent phenomenon in this than in any of the other forms of eruptive fever. In the epidemic of 1821, the eruption was wanting in a great number of the individuals attacked (*febris sudatoria*).

During convalescence from this affection, secondary diseases are more rarely observed than in recovery from any of the other eruptive diseases. When they do occur they are usually gastro-intestinal affections, and they occasionally consist in eruptions of boils, or of pustules of ecthyma.

379. *Alterations of structure*.—From the small number of post-mortem examinations that have been made of the bodies of individuals who have died of this disease, it would appear that when the fatal event is preceded by anxiety, pain, and a sense of heat or burning in the epigastrium, the mucous membrane of the stomach is red, and its capillaries are injected. This state of increased redness is continued into the duodenum and small intestines, where, however, it becomes less apparent. When the death had been sudden and was preceded by nervous symptoms, the vessels of the brain were found injected; in those cases in which the catastrophe was less rapid, a quantity of serum, greater or smaller in amount, was invariably found in the ventricles of the brain.

These inquiries, however, are still very incomplete.

380. *Causes*.—In France this disease has principally been observed in Picardy, Languedoc, Normandy, Berry and Alsace. It commonly prevails as an epidemic. The epidemics denominated *sweating sickness*, which occurred in England in 1485, 1506, 1507, 1588, at Guise in 1759, at Beauvais, in 1750, at Hardevilliers, in 1773, &c., all differed essentially from the disease we are now investigating, in the important circumstances of duration and mortality. (a) The sweating disease with miliary eruption which prevailed in the department of the Oise in 1832, was much less extensively felt than that of 1821, and appeared to be modified by the reigning choleric constitution. In the epidemic of 1821, the theatre of its attacks was bounded almost on every side by extensive forests, and lay between north-west and south-west, the direction in which its ravages extended.

Excessive heat, and an atmosphere surcharged with electricity, have in some districts been observed to precede the appearance of the disease. It is, however, evidently endemic in certain situations, and may occur sporadically in the places where it has prevailed as an epidemic. Several well-informed physicians have confounded the disease with inflammation of the gastric and intestinal mucous membrane,<sup>2</sup> or with the eruptions of sudamina, which are observed during several acute diseases.

The miliary sudor only appears between the 43d and 59th degree of northern latitude. Moist and shady situations seem favourable to its development; but it is contagious, and once engendered spreads in the same manner as measles and scarlet fever. It does not appear that it can be propagated in any other way: several practitioners have inoculated themselves with impunity with the fluid of its vesicles.

No age gives immunity from the attack of this disease, but adults and females seem more especially obnoxious to it. During the epidemic of 1821, the number of those affected was so much the more considerable in each district, as it lay nearer to that which was first attacked, as the situation was unhealthy, and its poor were numerous. Mr. Menière ascertained that a great many of those who had been seized, during the epidemic of 1821, were again attacked and died during that of 1832.

381. *Diagnosis*. To make the peculiar characters of the miliary sudor stand prominently forward, it is enough to contrast it with the other eruptive fevers, and the diseases which, like it, are proclaimed on the surface under the form of vesicular eruptions.

In the sweating miliaria there is profuse and incessant perspiration, and generally an eruption of vesicles upon the skin, which appears

(a) The author, in a subsequent paragraph (384), insists, however, on the unquestionable analogy that subsists between the two diseases.

<sup>2</sup> See the critical notices of my work, "sur l'épidémie qui a régné dans le département de l'Oise, en 1821," inserted in the annales de la médecine physiologique. Janvier, 1823; and in the Journal général de médecine, t. lxxiii. p. 341.



like shagreen to the touch. In measles we have bronchial affections, and small red patches disposed in arcs of circles, separated by intervals in which the skin preserves its natural colour. In scarlet fever we have inflammation of the tonsils, and a bright, nearly uniform, raspberry red colour of the integuments. Neither of these diseases is accompanied by the excessive and continued perspiration which we remark in the miliary sudor.

The vesicles of the different varieties of herpes are larger than those of the miliaria; they also occur in clusters, and are confined to a single region of the body. Sudamina appear in several diseases, and do not form any morbid individuality, if the expression may be allowed; they are observed accompanying the furuncular inflammation of the bowels, rheumatism, phthisis, the milk-fever of puerperal women, &c. Acute eczema is not attended with sweating, and in its progress has no character in common either with miliary sudor or any of the eruptive fevers. The vesicles of eczema are far more minute, and those of chicken-pox more prominent and much larger than those of the sudor. As to those who would confound the miliary sudor with a gastro-enteric affection, their hypothesis brings to mind that according to which measles and scarlatina are maintained to be, the one a bronchitis, and the other an angina reflected upon the skin.

382. *Prognosis.*—The miliary sudor, in its simple state, is a perfectly mild disease. The fever and the gastro-intestinal symptoms which precede and accompany the sweating and the eruption; the affections of the brain, lungs and bladder which may intervene at different periods of its course, combined with the general character of the prevailing epidemic, render our prognosis unfavourable in different degrees, according to the severity of the symptoms.

However alarming the first symptoms may have been, if they decline or yield after the eruption has appeared, the issue of the disease will generally be favourable.

During the epidemic of 1821, the eruption was independent of any irritation of the stomach. I have seen it confluent without violent previous pain of the epigastric region, nausea, or redness of the tongue; and I have several times met with all these symptoms in patients who suffered from profuse and incessant sweating, without any eruption whatever. It was also independent of the sweating, seeing that it did not invariably succeed even the most profuse epidrosis.

Death often closely follows shriveling of the vesicles; and occasionally occurs very suddenly, at times,—even in a more unexpected manner than in the other eruptive fevers.

In the epidemic of 1821, the greatest mortality was observed among individuals of the ages of thirty-two, twenty-four and twenty-six. The mortality among males was one in thirteen and 3–11ths; among females it was not higher than one in twenty-eight and 7–10ths. Daily observations showed that the chances of death were greater at the beginning and decline of the epidemic than during the period of its greatest prevalence. Among certain trades or professions,—the makers of mattresses, bakers, postillions, smiths and farriers, the mortality was greater than among individuals exercising other callings. The mortality was very various in different districts or townships: at La Chapelle the proportion of those who died to those who were attacked was as one to two, whilst at Neuilly-en-Thel, it was not more than in the ratio of one to one hundred and eighteen.

383. *Treatment.*—Were isolation practicable it would unquestionably be useful in the epidemic sudor; the advantages of temporary emigration are undeniable; any other preservative means are uncertain in their efficacy.

Diluents, and the application of a few leeches to the epigastric region or to the feet, if there be pain in the stomach or head, answer in the milder cases of the disease, in the treatment of which, indeed, the purely expectant method may generally be recommended.

General blood-letting, either alone or combined with powerful irritants, such as mustard-plasters, and blisters, has been occasionally used with success, when the brain appeared about to be seriously affected. I know not whether the temporal artery has ever been opened under these circumstances or not. These cases often prove rapidly fatal, and this termination has not seemed to be even delayed by the repeated abstraction of blood from the general system, during

the period when the cerebral symptoms were threatened. In the miliary sudor, as in variola and scarlatina, these nervous phenomena are occasionally independent of actual inflammation.

After the eruption has appeared, blood-letting is always injurious. I have been witness to the fatal effects of repeated bleedings, practised with the view of cutting short the disease, which, in these cases, when it did not end fatally, nevertheless went through the whole of its usual phases.

When the eruption in this disease disappears suddenly, its return ought to be solicited by every means,—dry frictions, urtication, mustard cataplasms, &c.

Sudorific drinks may be recommended in some particular cases to increase the determination to the skin, or to recall the eruption should it have disappeared; it is not, however, in general, advisable to pursue any measures calculated to increase the sweating.

Pujol not only recommends patients labouring under this complaint to be lightly covered, but would even have them rise and expose themselves to the open air. Messrs. Schahl and Hessert inform us, that they have observed good effects from cold bathing, and the aspersion of cold water. I did not try this measure in the epidemic of 1821; but I have seen the spasm and pain of the epigastrium which precede the eruption, cease after the application of cloths dipped in cold water to this region.

Emollient cataplasms and glysters allay the pains complained of in the abdomen, and lessen the dysuria. The general warm-bath, or the hip-bath, is often used with success in appeasing the irritable state of the intestinal canal which occasionally continues during the convalescence of the patients.

In the epidemic of 1821 many practitioners tried the tartrate of antimony and the ipecacuanha, during the first stage of the disease, expecting, by these means, to render its subsequent progress milder and more regular. As a general and exclusive mode of treatment, this practice is really less efficacious than the simply expectant or moderately antiphlogistic system.

Aperients at the period of convalescence have been recommended by several practitioners. They were little used in the epidemic of 1821, and I do not recollect to have heard a single fact quoted which certainly proved their utility.

Lastly, there was a practice prevalent in the earlier periods of the epidemic of 1821, which nothing tended to justify, and which was soon abandoned; this was the keeping the whole of the patients, without distinction, constantly awake, in the intention of preventing *seizures of the brain*.<sup>1</sup>

Patients ought to be deprived of nourishment of every kind during the four or five first days of this disease, and confined exclusively to diluents. It may even be found necessary to continue this severe system of low diet so long as the seventh or eighth day. Patients may then be allowed a little veal or chicken broth, and the quantity and consistency of the food may be gradually increased afterwards. Almost all the relapses I observed, during the epidemic of 1821, were owing to indigestion, or the occurrence of gastro-intestinal inflammation.

It is almost needless to add, that due attention to cleanliness, to the renewal and purification of the air, to a regimen adapted to an acute disease, and a judicious employment of moral means ought in this, as in all other diseases, to be brought in aid of the medical treatment.

#### *Historical Notices and particular Cases.*

384. Hippocrates, Galen and Avicenna make mention of miliary spots or elevations which occurred during the course of certain febrile diseases; but the characters of these eruptions are too indefinitely given to enable us, at the present day, to decide whether the ancients were acquainted with the miliaris sudatoria or not, or whether their observations refer to the papular eruptions of dothineritic affections, or to the sudamina occasionally seen on the skin, in a number of acute and chronic diseases.

<sup>1</sup> I remark, as a very singular circumstance, that Rush, in his account of the yellow fever, as it appeared in the city of Philadelphia in the year 1793, p. 35, regards sleep as rendering the body more peculiarly susceptible of being influenced by the epidemic.



I conceive that I have, in another work,<sup>1</sup> demonstrated the unquestionable analogy that subsists between the sweating-miliaria of our own days, and the epidemic sudor, or sweating sickness, which ravaged England in 1485, 1506, 1517 and 1528.<sup>2</sup> The want of miliary vesicles in the old English disease, does not necessarily make it different from the disease we are now discussing, a great number of the patients attacked in the epidemic of 1821 having had no eruption.

Some choice and selection are necessary from among the cases and memoirs recently published on miliary sudor; many of them refer to *sudamina*, others to the accidental vesicular eruptions occasionally observed in puerperal women; others to the spots which accompany dothineritis, and so forth.

I confine myself here to pointing out several works in which the epidemic miliaria is described with accuracy,<sup>3</sup> and for farther details, I beg to refer to the treatise I published in 1821, and to the observations of Messrs. Menière, Hourman, Pinel-Grandchamp and Moreau,<sup>4</sup> on the epidemic which prevailed in the year 1832, in the department of the Oise.

CASE LVI.—*Sweating-miliaria of a mild character.* L. A. was seized on the 6th of August, 1821, with the sudor, shortly after the recovery of his wife. This patient presented a striking instance of the occasional mildness of the disease. When I asked him why he had sent for me, he answered that he "was sweating profusely, but had no complaint to make." He had taken to his bed after a slight sensation of uneasiness, and having several times felt chilly for an instant. His face was flushed, and when questioned closely, he complained of slight headache; he was drenched in a profuse and fetid perspiration; the tongue was white and thickly furred; the epigastrium was not tender, even on pressure being made; belly supple, urine natural, thirst not very pressing, in spite of the copiousness of the perspiration; pulse soft, giving sixty-two pulsations per minute; breathing natural; faculties of the mind untouched. (*Veal broth, infusion of borage sweetened with honey, for drink.*) August 7th. The patient, whose fears I had dissipated on the presumed danger of yielding to sleep, had slept quietly for several hours during the night. The sweating was as profuse as ever, but the heat of surface was neither excessive nor troublesome; the tongue was still covered with the same whitish fur; its edges were neither red nor inflamed; bowels confined, no pain of the abdomen, slight sense of oppression, pulse natural. 8th. Same state. 9th. The patient has had a good night, but complains of oppression, and a feeling of weight at the pit of the stomach; he sighs deeply at intervals, as if he would cast off some load that weighed upon the chest. There is no complaint made of throbbing or sense of burning in the epigastrium. The pulse is full, beating seventy in a minute; the skin is hotter, and the patient complains of itching over the loins and chest; a considerable number of red, conical, miliary vesicles are discovered on the neck, chest, and upper extremities, between which the skin preserves its natural colour and appearance. The pain of the epigastrium having increased, six leeches were applied to this region. The night of the 10th was more restless than wont, but the pain of the epigastric region and the sense of oppression had greatly declined since the appearance of the eruption and the application of the leeches. The bowels were still unrelieved; the urine was healthy; the patient was

without fever, although feeling considerable thirst; the vesicles, rather numerous on the arms, were thinly scattered on the legs and thighs. (*Beef tea.*) 11th. Several hours of tranquil sleep through the preceding night; sweating less; appetite beginning to revive; the vesicles gone. (*Soup.*) 12th. Patient well and able to rise. Though complaining at first of considerable weakness, he regained his strength very rapidly.

CASE LVII.—*Miliaris sudatoria; vomiting, delirium.* A. H., eighteen years of age, of a hardy constitution, had complained for some days of a want of appetite and a disinclination to labour not usual with him. On the morning of the 1st of August he felt a violent headache, sense of constriction about the epigastrium and nausea. He was then seized with vomiting, and with profuse and incessant sweating. The patient was greatly alarmed, his master having died of the same disease with which he now felt himself attacked, a short time before. August 2d.—The sweating continues; the face flushed, eyes sparkling, tongue covered with a thick yellow fur, pulse full, hard and frequent, furious delirium during the night (*fourteen leeches to the epigastric region*). 3d.—Excessive restlessness, the patient delirious and managed with difficulty (*a large bleeding from the arm, mustard poultices to the legs*). The ensuing night pretty tranquil; the sweating continues; the anguish and depression of the patient are extreme. He thinks nothing can save him from death. (*Sinapisms to the legs, and venesection in case the paroxysm returned.*) 4th.—The patient was not bled; the sweating continued as copious as ever; the eruption begins to be perceived on the fore-arms, hands and neck; throbbing and flushes of heat in the epigastrium, which is tender to pressure; other symptoms much the same. (*Glysters, six leeches to the epigastric region.*) 5th.—Sweating still continues; the eruption now appeared successively on the neck, arms, and thighs, chest and face. It is so confluent that the whole of the vesicles might be said to be in contact; they are more particularly crowded on the hands and wrists. Of all the patients I had seen, none presented so copious an eruption as A. H. 6th.—Apyrexia, skin rough to the touch, tongue less furred; the urine deposits a copious white sediment. 8th.—Symptoms still declining, no fever, evident desquamation of the cuticle, tongue almost quite clean, urine depositing, appetite returning (*veal and chicken broth, plain soup*). 9th.—Patient convalescent; the pulse is remarkably slow, only beating forty-five in a minute. The patient is able to rise, and feels comfortable. His final recovery was slow.

CASE LVIII.—*Sweating miliaria, hæmoptysis, dysuria.* M. B., jun., on the 25th of July, applied fifteen leeches to his legs in the hope of preserving himself from the sweating disease which prevailed around him. On the 6th of August he had the first symptoms of the disorder; supra-orbital headache, general lassitude, constriction of the epigastrium followed a few hours afterwards by the breaking out of a profuse and fetid sweat which drenched the whole surface of the body; mouth clammy and unpleasant, tongue white and furred, little thirst, slight pain of the epigastrium, which began after the sense of constriction went off, belly soft, bowels constipated, urine not much changed, pulse full, but not hard (seventy-five beats per minute); respiration natural, although the patient complains of a load on the chest, which on percussion is found to be everywhere resonant. (*Veal broth and lime-tree flower water sweetened with honey for drink.*) August 7th.—The sweating continues; the tongue is still white and coated, but moist; the thirst is by no means troublesome; the other symptoms are much the same, except that the sense of oppression about the chest becomes so great that the patient is truly agonized. This state of suffering was undoubtedly increased by the fear the patient expressed of sinking under a disease which he had seen commit such havoc around him. 8th.—The patient had passed a restless night; in addition to the symptoms already described he complained of a general tingling over the body, which was more especially troublesome in the region of the loins; in the course of the evening a great number of red miliary vesicles, scarcely rising above the level of the skin, made their appearance upon the loins, nape of the neck, and arms. The fingers passed over these parts received precisely the same impression as that conveyed by the surface of shagreen. The eruption came out rapidly; the patient was very restless during the three or four hours that preceded its appearance;

<sup>1</sup> Rayer. Histoire de l'épidémie du suette-miliaire qui a régné en 1821, dans les départemens de l'Oise et de Seine-et-Oise, 8vo. Paris, 1822.

<sup>2</sup> Joh. Cali Britannii de Ephemerâ Britannica, liber unus, summâ curâ recognitus, 8vo. Londini, 1721.—Forestus. Obs. et cur. medicæ, lib. xxviii. t. i. p. 198.—Schenck. Obs. med. rar. fol. Lugd., 1644, p. 739.

<sup>3</sup> Bellot. An febri putridæ Picardis suette dictæ sudorifera? 4to. Paris, 1733.—Description d'une fièvre putride maligne vulgairement appelée la suette, qui a régné en Guise en juin et juillet, 1759 (Journ. de méd. de Vandermonde, 12mo., t. xii. p. 354).—Epidémie du suette à Fréneuse, 1735 (Journ. de méd. de Vandermonde, t. xxv. p. vii).—Epidémie de suette à Beauvais en 1750 (Boyer. Méthode à suivre dans le traitement des différentes maladies épidémiques qui régneront le plus ordinairement dans la généralité de Paris, 12mo. 1761).—L'Abbé Tessier. Mémoire sur la suette qui a régné à Hardivilliers au mois de mai, 1773 (Mém. soc. roy. de médecine de Paris, 4to., t. ii. p. 46).—Gastellier. Traité de la fièvre miliare épidémique, 12mo. Paris, 1784.—Pujol. Mém. sur la fièvre miliare qui a régné au Languedoc et dans les provinces limitrophes, durant le printemps de 1782. Œuvres, t. iii. p. 261, 8vo.

<sup>4</sup> Menière. Note sur l'épidémie de suette-miliaire qui a régné dans le département de l'Oise en 1832 (Arch. gén. de méd., t. xxix. p. 98).—Hourman. Gaz. médicale, 4to., p. 271. Paris, 1832.—Pinel-Grandchamp. Lanc. franc., t. vi. p. 161.—Moreau. Journal hebdomad., Septembre, 1832.



violent pain in the head, anxiety about the præcordia, burning heat of the epigastrium, sense of oppression in the chest, and constriction of the stomach; the pulse was full, the sweating profuse, accompanied by a marked increase in the temperature of the surface. (*Antiphlogistic drinks; eight leeches to the epigastric region.*) 9th.—The eruption had spread over the whole surface of the body; it consisted entirely of reddish, slightly transparent, miliary vesicles; the fever ran high, the heat of skin was considerable; but the painful symptoms about the chest and abdomen had sensibly abated, and the patient expressed less solicitude about the issue of his illness. Between one and two o'clock in the morning, M. Pariset (who had attended the case along with me from the first), and I were summoned from our beds to see the patient who had been seized with a spitting of blood. We obeyed the call immediately, and found the patient much in the same state as we had left him at last visit, but extremely agitated, and declaring he should certainly be suffocated; he had had several fits of coughing, and in the matter expectorated there appeared a small quantity of florid blood not amounting to a tablespoonful in all. The chest on percussion carefully practised, sounded well throughout the whole space occupied by the lungs. The patient could fetch a long breath without pain. We attributed the new symptoms to a determination of blood towards the mucous membrane of the bronchi, which probably commenced but a few hours back; a period at which the patient had felt what he called an *accession*, ascribable to no particular cause. I immediately bled him to the extent of eight ounces; the pulse was scarcely weakened by this operation; cataplasms of linseed meal and flour of mustard mixed, were applied to the feet, and the cooling drinks were continued. 10th.—The blood withdrawn was buffy; the serum scanty; the patient had slept; the pulse was soft and less frequent, and a long breath could be drawn without causing cough or any uneasiness in the chest. The tongue was still white; the constipation continued; the vesicles were less numerous; the sweating still profuse but without heat of surface. During the course of the day the patient began to complain of a deep-seated pain in the hypogastrium; this was increased by pressure and accompanied by frequent calls to make water, with pain in the bladder on passing the urine, which was only excreted in very small quantity, high coloured, and loaded with salts,—if such an inference might be drawn from the amount of deposit let fall in the chamber utensil. These new symptoms were met by fomentations and emollient cataplasms to the hypogastric region, and by mucilaginous glysters. Next day almost the whole of the bodily functions appeared to be restored to their natural condition; the sweating was transitory and not very copious; no desquamation of the cuticle had taken place, and the vesicles were disappearing. The patient took some beef-tea with bread in it, during the course of the day. By the 12th there were no longer any traces of the disease, and on the 15th the patient was able to go out and attend to his business. (a)

(a) *Three cases of sudatoria, observed in the Hotel Dieu, during the summer, 1842.* The following cases of a very rare affection were reported, by M. Marrotte, as having appeared in Paris, towards the close of the epidemic of typhus fever which had raged in that city. M. Honoré, in whose wards the patients lay, had never before seen cases of this disease; and M. Rayer, who is well acquainted with the disorder, had never seen it in Paris.

"CASE 1.—A young man, twenty-three years of age, was received into the hospital, July 29, complaining of pain in his head, lassitude, great prostration, thirst, and drowsiness. His skin was hot, pulse frequent, tongue and teeth foul: had had no action of bowels, which could only be brought to move by medicine; no rumbling in the iliac fossa. There were none of the lenticular spots which accompanied the prevailing epidemic. The skin, though very hot, was neither dry nor burning; on the contrary, it was moist. He complained, moreover, of an uneasy sensation and feeling of anxiety at the pit of the stomach, which led to the administration of an aperient emetic.

"The present symptoms have lasted for three days. His first indications of disease were, general uneasiness and loss of appetite, which were not sufficiently pressing to induce him to relinquish his duties. Suddenly, in the middle of the day, he was seized with pain in the

head, and great prostration, which forced him to take to his bed, but he had no rigors, nor diarrhœa; his skin was at the same time covered with a moderate, though constant perspiration.

"For two or three days after admission, the patient continued in the state above described, without having been benefited by a bleeding from the arm, practised previously to his application at the hospital. After this period, the disease assumed all its severity; the prostration and drowsiness were more marked; the perspirations and oppression became more intense. The perspirations streamed forth continually from the skin, the heat of skin increased, the pulse became stronger and more frequent, the oppression was accompanied by cough and mucous expectoration, and auscultation discovered mucous râles throughout the whole extent of the bronchi.

"This combination of symptoms persisted in all their force for ten or twelve days: at the expiration of this period, the patient felt improved. His amendment seemed in some degree to have been effected by a change in the position of his bed to a better ventilated situation. Under the influence of this change of position, the perspirations diminished, the tongue became soft, moist, and simply furred; the teeth became clean, and the thirst was diminished.

"On the 25th of August, the patient is progressing; the surface is still moist in situations where the skin is naturally perspirable. Vesicles are dispersed about the neck and trunk, some being filled with a milky serum and surrounded by slight areola; others being transparent. The return of appetite is more tardy.

"CASE 2.—A man, upwards of six feet in height, thirty years of age, had felt every evening a sensation of feverishness for about twelve days; his appetite failed; he suffered from thirst; his skin felt burning hot, and he experienced considerable drowsiness. Since his admission, the fever has become increased and continued; his skin is covered by a constant perspiration; he has headache, pain in the left side, anxiety, and oppression at the præcordia.

"In the course of five or six days, the anxiety and oppression have assumed an excessive degree of intensity; he has cough and expectoration, and mucous râles are very obvious throughout the whole of his chest. The perspirations have increased, together with the heat of skin, and the hardness and frequency of the pulse. The abdomen is distended, the tongue thickly furred; there are great prostration, and perpetual drowsiness. An eruption of red pimples appeared upon the neck, and spread thence to the face and trunk; in two or three days these pimples were surmounted by vesicles, containing a lactescent fluid, and were followed by successive eruptions of sudamina, chiefly of the phlyctenoid kind, which occupied the vacant spaces between the papulæ.

"As the eruption increased and advanced in development, the oppression diminished, the pulse became softer, and the abdomen diminished in bulk. In this patient, as in the former, the bowels were inactive, and required the aid of medicine. His intellectual powers were unaffected, and the appetite returned gradually to its normal standard during recovery. On the 25th of August he was convalescent.

"CASE 3.—A young man, twenty-four years of age, for some time past suffering from uneasiness, loss of appetite, and lassitude, for which symptoms he was bled from the arm without benefit. He was next seized with headache, vomiting, diarrhœa, and perspirations, and was forced to take to his bed, where he remained for eight days, suffering with perspirations during the whole period.

"On admission, August 16th, he was in a state of extreme prostration; heaviness was exhibited in his features, his tongue and teeth were covered with sordes, the perspirations were general and continual, his abdomen was distended, and he suffered from thirst. For several days he remained in this state, answering with difficulty the questions that were put to him. He had retention of urine, and upon the passage of a catheter, a full basin of clear urine was withdrawn. In seven or eight days from this time, his state was improved; the stupor has diminished, and the tongue is moist. The perspirations are mitigated, and this mitigation became strikingly apparent as soon as the patient was removed to a better ventilated situation. They have not yet, however, wholly ceased; the hardness and frequency of the pulse have yielded.

"From this period, amelioration was as speedy as in the former



## SUDAMINA. (a)

Vocab. *Hydroa, Sudamina.*

385. *Sudamina* is a title given to minute prominent vesicles, the size of millet-seeds, of a round shape, transparent, and formed by a limpid watery fluid effused under various points of the epidermis. These small vesicles occur, without accompanying redness of the skin, in the course of many acute and chronic diseases, independently of the severity of their general symptoms.

386. *Causes and symptoms.*—This peculiar eruption is only observed in morbid states of the system. It appears most generally in dothineritis (*typhoid fever*), in scarlatina, measles, pleuro-pneumonia, and peritonitis, especially in that form of the disease which occurs during the puerperal state. I have observed it occurring, although very rarely, in diseases of no severity,—such as slight intermittent fevers and trifling affections of the mucous membrane of the bowels.

387. *Sudamina* almost always appear along with profuse sweating, but in the furuncular affection of the bowels (*dothineritis*) I have seen the eruption take place without any sensible increase of the cutaneous perspiration. On the other hand, I have occasionally witnessed very profuse perspirations without the evolution of *sudamina*; among the phthisical, and those affected with the sweating miliaria of 1821.

*Sudamina* more commonly appear in the course of acute or chronic diseases, among females than males, among the youthful than those of riper years, and less frequently among the latter than the aged. The eruption is more commonly met with during the hotter months; the colder seasons of the year, however, do not prevent its occurrence.

388. *Sudamina* may appear on almost every part of the body, but occur more generally on those regions where the cuticle is the thinnest and most delicate, as on the front of the abdomen and thorax, on the neck, groins, and axillæ. The eruption very seldom occurs on the skin of the back, limbs or face.

Occasionally the eruption is almost general; more frequently, however, it appears on only one, or but a small number of districts at the same time.

The eruption is never preceded by a sense of tingling in the parts it invades. The size of the vesicles is very variable; some are so small as to be barely perceptible to the naked eye, whilst others equal a millet-seed in size. The vesicles, which at first sight, might be taken for small drops of perspiration, are rounded, globular and prominent, and so brilliant and transparent that they seem deposited on the surface

cases, but the return of appetite was not so marked as is customary after typhus fever; he was not so much emaciated as are patients convalescent from the latter disease, but he appears more debilitated.

“M. Marotte remarks, with regard to these cases, on the exacerbation which took place at the close of the fifth or sixth day; the continuous perspirations which existed at that period both day and night; the intensity of the prostration and drowsiness; the cutaneous eruption which at this period made its appearance, but without being critical; the oppression and anxiety at the præcordia appearing with the perspirations; the protraction of amendment to the term of two weeks from invasion; the continuance of perspirations to the close of the third week, and the marked benefit resulting from better air and ventilation; all of which symptoms he looks upon as pathognomic.

“Contrasting the disease with typhus fever, he recalls the negative characters of sudatoria. There was no diarrhœa in the commencement; there were no headache, rigors, or vomitings; the prostration of the physical powers is rarely so great; it is rare that the tongue and teeth are so speedily covered with sordes, or that drowsiness is so strongly marked. The first week passed away without epistaxis, and without lenticular spots. The pulse of sudatoria, again, has never the smallness and frequency of the pulse of typhus.” Wilson (*op cit.*)

(a) M. Rayer very properly separates miliaria, or military fever, which is often a severe constitutional disease, and sometimes prevails epidemically, from *sudamina*, which is symptomatic and the occasional accompaniment of so many different diseases.

of the skin. Although most generally distinct, they are occasionally seen confluent, in which case they form small irregular bullæ, similar in their colour to that of the skin, around which no redness is perceived, except in a few extremely rare instances, and then it is only at the base of a very small number of the vesications.

In some cases the vesicles within a few hours after their appearance begin to fade and grow milky, when they quickly disappear. In others, again, they preserve their perfect transparency and globular form for four and twenty hours and even longer; they then lose their lustre, shrivel, and, before the end of the third or fourth day, are no longer to be seen. Lastly, it sometimes happens that this eruption runs its course more slowly, and does not totally vanish before the seventh or eighth day. The vesicles of *sudamina* rarely burst of themselves; the fluid they contain is usually reabsorbed; the epidermis is thrown off and no trace of their existence is left. Although ruptured by the rubbing of the clothes, as frequently happens, they never give rise to the formation of scabs. If they be opened a short time after they appear, a small smooth and reddish depression is perceived in their interior, which is effaced in the course of a few minutes. When the vesicles have been very numerous or confluent, the cuticle is occasionally detached in pieces of some magnitude. It even happens occasionally that the slightest friction is sufficient to detach it from the intervals of skin between the vesicles, thus exposing the naked surface of the corion, which is at first of a pale rosy-red hue, but speedily acquires a brighter tint.

When the eruption has disappeared spontaneously, small whitish spots are observed to remain, corresponding with the points occupied by the vesicles. These marks are speedily effaced.

The eruption of *sudamina* usually occurs successively; but it may show itself on several regions at the same time.

As to the fluid contained in the vesicles of *sudamina*, it is thin, (*vaporis instar*, Becker,) colourless, inodorous, almost tasteless and without viscosity; it does not redden turnsole paper, and appears therefore to differ from the perspiration, which has usually this property.

389. *Diagnosis.* It is enough to have seen the eruption of *sudamina* once to recognize it ever afterwards. The touch distinguishes it in an instant from drops of sweat standing on the surface. It is never preceded by redness of the skin, nor by pruritus, like eczema, hydrargyria, and the vesicles which follow exposure to the burning rays of the sun, (*eczema solare*), with which it has been, by mistake, confounded. The eruption of *sudamina* is not preceded, and still less is it accompanied by the febrile symptoms which are observed along with the sweating miliaria, and the other eruptive fevers. Nevertheless, puerperal peritonitis attended with an eruption of *sudamina* (which was improperly designated under the title of *miliary fever*) was long and is still occasionally confounded with the epidemic miliaris sudatoria or sweating disease of Picardy.

390. *Prognosis.*—*Sudamina*, and the sweating which accompanies the eruption, have appeared to be critical under certain circumstances. This eruption, however, in the great majority of instances, does not seem to have any influence on the progress of those diseases in the course of which it occurs; it is a phenomenon the more and nothing beyond.

Several writers have looked on the eruption of *sudamina* as an unfavourable symptom; and it is undeniable, that it happens more commonly in severe diseases than in those that are unattended with danger.

*Historical Notices of the Disease.*

391. Forestus<sup>1</sup> has specified the principal characters of *sudamina*; the definition of Blancardus<sup>2</sup> appears applicable to lichen and eczema solare. Under the title of *hydroa*, Jos. Frank<sup>3</sup> has comprised and described the lichen *tropicus*, herpes *labialis*, and the peculiar eruption of typhoid fevers: this is more than mere confusion of nomenclature.

M. Barbié du Bocage<sup>4</sup> has detailed an excellent account of the

<sup>1</sup> Forestus. Lib. ii. obs. 139.

<sup>2</sup> Blancardi Lexicon. Art. hydroa.

<sup>3</sup> Frank (Jos.). Præxeos univ. medic. præcepta, 8vo., t. iii. p. 9.

<sup>4</sup> Barbié du Bocage (L.). De l'éruption des sudamina, 4to. Paris, 1828.



characters of sudamina. Andral<sup>1</sup> has given a case in which the vesicles were as large as bullæ. M. Louis<sup>2</sup> has seen the eruption accompanying phthisis and dothineritis; I have, myself, met with it, I may say, in all the diseases during the course of which it is liable to occur; and if I give no particular instance of it here, it is because the eruption is, in fact, a symptom common to many maladies, and of no great importance in itself.

## ARTIFICIAL VESICULAR ERUPTIONS.

392. The following cases seem to me calculated to convey some information upon those artificial vesicular eruptions, the speciality of whose several causes characterizes them individually, and the short duration and slightness of which, separate them no less distinctly from the whole of the other eruptions that appear under the same elementary form.

CASE LIX.—*Vesicular and papular eruption produced by exposure to the sun's rays (eczema solare, Willan).* Mr. G. having, on the 20th of July, 1821, bathed in the Seine at mid-day, during excessively hot weather, got scorched with the sun. In the evening, the nape of the neck, the back, loins, shoulders, and inner parts of the arms, became of a scarlet-red, and continued extremely itchy during the whole of the night. Next morning an immense crop of vesicles could be distinguished by the naked eye, and still better by the magnifier, covering the red and inflamed surfaces of the skin. These vesicles were of the size of the head of the smallest pin that is made, and contained a small drop of transparent serum, the presence of which could be readily demonstrated by piercing them with a fine needle. Dispersed among these innumerable vesicles, there were a certain number of solid elevations similar to the papulæ of lichen, which contained no fluid. The eruption was not accompanied with fever, nor with any other derangement of the functions generally; (*cold-bath, sherbet of tartaric acid, antiphlogistic regimen.*) During the next and following day, there was a gradual abatement of the redness of skin, and the vesicles and papulæ were less distinct than they had been. The same plan of treatment was continued. Three days afterwards, a slight desquamation took place from the back, the pruritus ceased completely, and the patient felt perfectly recovered.<sup>3</sup>

CASE LX.—*Vesicles produced by exposure to the sun.* M. \* \* \*, thirty-two years of age, somewhat corpulent, and having a fine skin, after the excessive heat that was felt on the 10th and 11th of June, 1825, experienced a considerable degree of itching on the backs of the hands and between the fingers, occasioned by elevations, on the nature of which I was consulted. The skin in these places, which were rough to the touch, presented an immense quantity of minute vesicles, the greater number of the size of a pin's head, and a few a little larger. These vesicles were very irregularly scattered over the parts mentioned. The skin did not appear inflamed, except in those situations where the patient had scratched himself; and in these the vesicles were succeeded by small yellow scabs. The hands were swelled and red, as they usually appear during the heat of summer. I recommended M. to endure the pruritus without scratching, to bathe the hands frequently with cold water, and not to expose himself to the rays of the sun, but to wear light muslin gloves. The vesicles continued five or six days longer; the itchiness then diminished, and on the 23d of June, no traces remained of this slight inflammation. Small circular laminae of the epidermis were subsequently detached from several points which had been the seat of vesicles.<sup>3</sup>

CASE LXI.—*Artificial vesicles from the application of a Burgundy pitch-plaster.* Plasters of Burgundy pitch frequently excite a vesiculopustular inflammation, when they are kept applied for too long a time. M. D. \* \* \*, thirty-eight years of age, of a stout and plethoric habit, consulted me on account of a lumbago with which he had been affected several times. I recommended the use of purgative glysters,

and the application of a Burgundy pitch-plaster to the loins. Three days afterwards, M. D. \* \* \* summoned me to his assistance in order to free him from his plaster, which had caused so much itching that he had not closed his eyes during the preceding night. On removing the plaster, I perceived that the whole skin of the loins was covered with an infinity of small, transparent and but slightly prominent vesicles. The skin in this situation showed nothing of a general erythematous blush; it was only here and there it appeared a little redder than in the natural state. The inflamed skin was cleansed with a little oil, and covered with compresses dipped in the mucilaginous decoction of althæa and poppy-heads. Eight days afterwards the lumbago and vesicles were both completely cured.

CASE LXII.—*Eruption similar to the eczema rubrum from the internal use of cubebs pepper.* N. \* \* \*, thirty-eight years of age, contracted a clap in the month of March, 1829. After a due interval had elapsed, I commenced administering the cubebs pepper in the dose of a drachm every day. After four doses had been taken, the discharge was considerably diminished, and no longer accompanied with pain. After the sixth dose, N. \* \* \* felt the whole skin of his body become excessively itchy. This sensation was speedily followed by an eruption, the size of pin's heads, and not very prominent, which appeared principally about the instep, and over the wrists and knees, situations where the pruritus had been more particularly troublesome. The skin was hot, red and swelled. The eruption seemed to differ in nothing from that which characterizes *eczema rubrum*: vesicles were very distinct under the magnifier, and when pricked with a fine needle, a small drop of transparent serum escaped from their interior. The affection of the skin was neither attended with fever, nor with any other evident functional disturbance. Compresses wetted with soothing decoctions, applied to the affected parts, were found to increase the pruritus, and were consequently discontinued. Keeping the parts exposed, and sponging them repeatedly with cold water, gave speedy and great relief. The inflammation abated in the course of a day or two; a few of the vesicles became covered with small yellow scabs; in general, however, they were only followed by desquamation of the cuticle, the fluid they contained being in all probability reabsorbed. Within eight days the patient was well.

CASE LXIII.—*Vesicular and pustular eruption from the external application of the oil of the croton tiglium.* I. M. \* \* \*, aged sixty-four, was admitted into the hôpital de la Pitié, on the 29th of February, on account of a *gastro-enteritis*. With a view of relieving the constipation of the bowels, thirty-two drops of the croton oil were directed to be rubbed in upon the abdomen. This application was followed by alvine evacuations, and by a vesicular eruption of the skin, the cause of which was at first overlooked. On the morning of the 8th, the face of the patient looked puffed, and the skin of the forehead and cheeks was of a pale red colour, which disappeared on pressure. Towards the alæ of the nose and over the left cheek, a number of excessively minute whitish vesicles were discovered. 9th. Face swelled, and redder than ever; and the cheeks, lips, chin and nose, were now distinctly seen to be covered with small whitish vesicles, very much crowded together. These were prominent, and without areolæ. The eyelids were slightly œdematous. The skin of the abdomen was covered with a vast number of vesicles of the same form, but larger and more elevated. These were white, filled with a limpid serous fluid. An eruption of the same kind was observed on the forearms. 11th. Desquamation had taken place around the mouth and upon the lips; the redness and puffing of the face had disappeared. 12th. Desquamation going on over every part of the face and abdomen that had been affected. Termination of the eruption. The treatment of the affection of the digestive organs was continued.

<sup>1</sup> Andral. Clinique médicale, t. i. obs. x. p. 54.

<sup>2</sup> Louis. Rech. anat. path. sur la phthisie, 8vo., p. 212. Paris, 1825.—Recherches sur la fièvre typhoïde, 8vo. t. ii. p. 244. Paris, 1829.

<sup>3</sup> Consult. Ehrenberg, on the hydroaestivum Ægyptiacum (Bulletin des sc. med. de Férussac, t. xiii. p. 232).



## II. PUSTULÆ.

## PUSTULAR INFLAMMATIONS.

Vocab. Pimple, Pustule, Psudracia, Phlyzacia.

393. The pustular inflammations of the skin are characterized by the evolution of *pustules*; that is to say, by circumscribed pimples from half to three-quarters of a line in diameter, often surrounded at their base by an inflamed areola, and formed at their acme or height by a purulent, non-serous fluid, deposited within a follicle, or between the outer surface of the corion and the epidermic layers. Pustules terminate variously, by the *reabsorption* or the *desiccation* of their fluid contents, in the latter of which cases, scabs are formed by *ulceration*, and by *tuberculated induration*. Their presence is subsequently indicated by *marks*, and frequently by *cicatrices*.

394. Seven forms of pustular inflammation of the skin are reckoned; *variola* and its modifications (*varicellæ*); *vaccinia* and its modifications (*vaccinellæ*); *acne*; *rosacea*; *mentagra* or *sycosis*; *impetigo*; *favus*; and *ecthyma*. To these must be added artificial pustules, and pustular syphilis, which I have, however, seen reason to associate with a different order.

I have already observed, that in the arrangement of Bateman, scabies was erroneously placed among the pustular diseases, and I shall now give my motives for grouping together variola and the different varieties of *varicellæ*, three of which are decidedly pustular in their nature; *vaccinia* and the *vaccinellæ* I have also felt obliged to class with pustules and not with vesicles. Pustules, in fact, differ from vesicles, not only in the circumstance of their containing pus or a non-serous fluid at the period of their height, but farther by the depth and intensity of the inflammation attending them. The latter character has appeared to me of so much the more importance as the serum of almost all vesicles becomes turbid, and occasionally even purulent at the time of their desiccation, whilst the fluid contained in several pustules is unquestionably serous at the outset. Willan and Bateman are both evidently mistaken when they maintain that *rosacea* and *mentagra* begin by tuberculations, for these diseases are undoubtedly *pustular* at first. Of the *tineas* and *porrigos* I have only preserved *favus* (*porrigo lupinosa*, and *porrigo scutulata*), having for several years past, perceived that the other eruptions of the hairy scalp were mere varieties, owing to peculiarities in the structure of the surfaces affected, of *eczema*, *impetigo*, *psoriasis*, &c.

395. Viewing pustules in a general manner, Willan conceived that they might be reduced to two principal forms. And we do, indeed, observe that some are usually of a large size, seated on an indurated circular and inflamed base, and terminate in a hard thick scab, generally of a brown or brownish colour: such are the pustules of *variola*, of *ecthyma* and of *vaccinia*. These are the *phlyzacious pustules* of Willan. Others, again, the *psudracious pustules* of the same author, are small in size, often irregularly circumscribed, scattered or arranged in clusters, and terminate in crusts of various forms (the pustules of *impetigo*), or by tuberculated indurations (the pustules of *rosacea*, *acne* and *sycosis*); but these various species of pustules present other differences in their modes of development, and in their appearances, which render this distinction of Willan altogether of secondary importance.

396. Among the pustular inflammations some, as *acne*, *rosacea* and *mentagra*, are partial, that is to say, they never appear over the whole surface of the body; others, such as *variola*, *favus* and *ecthyma*, either appear on or may extend to every region of the skin.

Pustular diseases are occasionally accompanied by inflammatory affections of the mucous membranes. But the variolous eruptions are the only ones in which these membranes actually exhibit in those places where they are provided with an epithelium, true pustules analogous to those which are perceived on the skin.

397. Each pustular inflammation possesses peculiar characters which are due to its seat, its form, its extent, the amount of inflammation accompanying the pustules, and the mode of their eruption,

as this is simultaneous or successive. Some pustules, as those of *rosacea*, are flattened; others, as those of small-pox, are acuminate in their commencement and umbilicated or depressed in their centre at the acme of their development, and so forth. The fluid which pustules contain, usually opaque and white at their height, is transparent and viscid at first in *vaccinia*, and pasty in *variola*. This fluid is generally deposited in a single cavity; in *vaccinia*, however, it is included in a multitude of cells. The matter of the pustules of *variola*, *vaccinia* and *favus* is contagious.

398. The greater number of pustules dry off in the form of *scabs* (*impetigo*, *variola*, *vaccinia*, &c.); some of them decline at times into true *ulcers*, (*ecthyma luridum* and the pustules of syphilitic origin); and others frequently degenerate into *tubercles* (*acne*, *rosacea*, *mentagra*).

The scabs produced by the drying up of pustules, present secondary characters, which demand attention. Those of *favus* are yellow and cup-shaped; those of *impetigo* are prominent, yellowish, greenish or brownish in colour (*impetigo figurata*), and granular (*impetigo of the scalp*), or stalactitic in form. The characters supplied by the chemical analysis of scabs are of but little interest; and as scabs and incrustations are only formed during the latter stages of pustular inflammations, it is easy to conceive that distinctions based upon such grounds must be extremely vague and imperfect.

The state of the skin beneath scabs, ought to be so much the more carefully investigated in the diverse species of pustular inflammations, as the incrustations may be accidentally altered, having been removed entirely, or in part, by washes, cataplasms, and other topical applications. The measure and amount of these hidden alterations of the skin, the number, the form and the appearance of the *erythematous patches*, of the *sores*, and of the *tuberculations* which follow pustular inflammations, ought to be studied and detailed with the most scrupulous precision. Even the *cicatrices*, when they occur, are occasionally found to be stamps characteristic of the disease which has produced them.

399. The greater number of the pustular inflammations may, upon occasion, be observed occurring at the same time, and complicating one another, without their respective courses being in any way influenced by this circumstance. Others, on the contrary, such as small-pox and cow-pock, are never developed simultaneously without being modified; they are even mutually exclusive of each other in the majority of cases in which one of them has gone regularly through its several stages. Pustular inflammations are also occasionally complicated with cutaneous affections of a different order. Lastly, pustular eruptions are frequently preceded or attended by inflammation in a greater or less degree of the mucous membranes; and those of *variola* especially, and at times even of *varicella* and *vaccinia*, are ushered in by other functional derangements of various degrees of severity.

400. The duration of the pustular inflammation is extremely various; some of them, as *variola*, *varicella* and *vaccinia*, are regularly *acute* and rapid in their course; *favus*, *rosacea*, *mentagra*, &c., are as constantly chronic in their nature.

401. Of all the different forms of cutaneous inflammation, vesicles are the most nearly allied to pustules. The latter differ from the former by being evidently accompanied with a higher degree of inflammation, and more frequently followed by *cicatrices* and tuberculated indurations. Pustules, at their *height*, are easily distinguishable from the *exanthematous*, *papular*, *tubercular*, *squamous* and other forms of inflammation; but this is not the case at every period of their development; and in some cases it would even be impossible to say, from a simple inspection of the eruption, and without taking into account preceding symptoms, the rapidity or tardiness of its evolution and so forth, whether the disease was to be pustular or not in its future stages. The *spots* or small *red elevations* by which the greater number of pustular diseases are announced are not characteristic; pustules in themselves are in fact only completely proclaimed at the summum of their development; several, as those of *vaccinia* and of *varicella*, begin by small papular elevations of the skin, the summits of which are soon filled with a limpid fluid like that of vesicles, and only ultimately acquire the character of pustules. Lastly, the scabs, *erythematous spots*, *ulcers*, and *indurations* that succeed pustules, have not regularly and in every species, external characters

<sup>1</sup> Levain. Essai sur l'eczema, p. 19, 4to. Paris, 1830.



sufficiently striking to admit of a diagnosis being established after their mere appearances. (a)

(a) Mr. Wilson includes some of the *pustulæ* of Willan. M. Rayer under the head of *Suppurative inflammation of the Dermis*. His introductory remarks on the occasion come in appropriately in this place.

"Under the influence of a degree of inflammation of the dermis, for the most part greater, at least at its commencement, than that which exists in the effusive group of diseases, the inflamed dermis gives rise to the formation of pus; the pus occupying the surface of the dermis, and producing an elevation of the epidermis to a limited extent. This irregularity of the surface of the skin—namely, an elevation of the epidermis consequent on the presence of pus, is termed a *pustule*, and this is the only accurate sense in which that term can be employed. There is a wide distinction between a vesicle and a pustule, when these two pathological forms present their typical characters; but it not unfrequently happens, that in consequence of a reparative action set up in the vesicle, pus is produced upon its dermic base, and mingling with the serum, constitutes a sero-purulent, and subsequently, a purulent or pustular vesicle. In such a case it is necessary to remember that a true pustule contains pus from the first moment of its formation, and by this circumstance is essentially distinguished from a vesicle.

"It is requisite, at the outset of our study of cutaneous diseases, to be most precise in our definitions, and to draw as broad a line as possible between the various pathological forms which we are desirous of characterizing. Scarcely any word has been used more loosely than the term pustule in medical nomenclature. At one time it was employed to signify a papula, at another a vesicle, and it was not until the time of the Linnæus of cutaneous pathology, that the proper application of the term was truly made. Willan employed it, with the characters above stated, as the type of his fifth order—*pustulæ*; and in this sense it has been subsequently adopted by successive dermatologists.

"The diseases which I propose to consider under the definition above given, are two in number—namely,  
Impetigo,  
Ecthyma.

"The order *pustulæ* of Willan embraces five diseases, two of which, had he lived at the present time, would, I am convinced, have been excluded by himself—namely, porrigo and scabies. The genus porrigo of Willan contains diseases of the most opposite kind, and has been the source of much confusion, so much, indeed, that it would be well that the term should, for the future, become obsolete and forgotten. What relates to true porrigo will be found in this classification under the designation, *favus*. Scabies, again, is a disease possessing several elementary forms, of which both vesicles and pustules are accidental, and only occasionally present; the pustules, when they exist, belonging to ecthyma. Variola, as placed by Willan in the order *pustulæ*, is forcibly torn from all its natural affinities, and for this reason I have thought it correct to transfer the genus to the group of eruptive fevers. Rayer admits no less than ten genera of pustular inflammations, for four of which he is indebted to variola—namely, variola, varicella, vaccinia, and vaccinella. There could have been no objection to thus establishing a distinct group of variolous affections—indeed, some benefit might have flowed from such an arrangement—but the possible advantages are immediately destroyed by the companionship with which he has leagued them. Thus, from the highly inflammatory and contagious fever of variola, we pass on immediately to three diseases of the sebaceous glands—namely, rosacea, acne, and sycosis; next in order follows impetigo, then favus, a peculiar disease of the hair follicles, and lastly, ecthyma.

"The genera impetigo and ecthyma constitute the two essential forms of pustules indicated by Willan—namely, *psyrdracia* and *phlyzacia*, the former being a *psyrdracious* (ψυδρα, ψδραξια, frigida guttula) pustule—that is, 'a small pustule, often irregularly circumscribed, producing but a slight elevation of the cuticle, and terminating in a laminated scab. Many of the *psyrdracia* usually appear together, and become confluent; and, after the discharge of pus, they pour out a thin, watery humour, which frequently forms an irregular incrusta-

Vocab. *Variola, Varioloid, Varicella, Small-pox, Chicken-pox, &c.*

402. Under the name of *variolous eruptions*, I comprise several vesiculo-pustular, acute and contagious inflammations of the skin, which the strong resemblance they bear to each other in their mode of development, in their course, and especially in their constant association, when small-pox appears as an epidemic, as well as their reproduction mutually, the one by the other, authorize us in considering as effects of one and the same cause.

These eruptions have, in truth, a greater number of points of resemblance and of natural connection than many other diseases, the identity of whose origin has never been disputed,—than syphilitic affections for instance.

403. The variolous eruptions may be arranged under two series: the one comprising the *pure and legitimate variolæ* which give the type to the genus; the other including the *varicellæ* which appear to be modifications of the former. This second series may be subdivided into five principal forms, most usually met with mingled together; these are:—

- 1st. The *pustular umbilicated varicella* or varioloid;
- 2d. The *pustular conoidal varicella*;
- 3d. The *pustular globose varicella*;
- 4th. The *papular varicella*; and
- 5th. The *vesicula varicella* or chicken-pox.

404. The affinity of these affections, or their origin from the same source, is demonstrated by the following facts:

1. During the prevalence of a variolous epidemic those individuals who have never had either small-pox or cow-pox, are almost inevitably attacked with the pure or legitimate variola, characterized by an eruption of umbilicated pustules and the occurrence of secondary fever; other individuals again, and these are such as have either had small-pox naturally or by inoculation, or such as have been vaccinated, show the umbilicated pustules of variola, but at the end of the seventh or eighth day there neither occurs any period of suppuration nor any secondary fever (varioloid); in some others, independently of this change in the current and duration of the disease, the form and structure of the pustules are modified (pustular conoidal, and globose varicella); in others still, the appearance of the eruption is even farther changed, and instead of pustules we have papulæ and true vesicles thrown out on the skin (papular and vesicular varicella or chicken-pox); lastly, in a very small number the disease is proclaimed by the same general symptoms, and advances without any eruption (variolous fever). This manifestation, or rather this association of variola and of the varioloid and other varicellar eruptions, during the prevalence of a variolous epidemic, was particularly observed in Scotland in 1818; in England in 1822–23–24 and 25; at Philadelphia in 1824; at Montpellier in 1819; at Paris in 1825; at Marseilles in 1828, and in many other places.

In the epidemic of Paris, in 1824, variola prevailed during July and August, and varioloid and varicella during September. In the attack of 1825, cases of varioloid and varicella were observed during the whole continuance of the epidemic, but were more particularly abundant in the month of October when its virulence had abated. One single cause, the epidemic influence, gave occasion to these various eruptions; they were observed in the same districts, the same streets, the same houses; if the disease broke out in a large family,

tion.' The latter, a phlyzacious (φλυξεν, to be hot) pustule—that is, one, 'commonly of a large size, raised on a hard circular base, of a vivid red colour, and succeeded by a thick, hard, dark-coloured scab.' The achor and the favus of Willan are no longer considered as pustules.

"The transition, which I have already had occasion to remark, from erythema to pemphigus, and from rupia to herpes, may also be extended to pustulous affections. Eczema, in certain of its forms—as in the impetiginous variety—is seen gradually merging into impetigo, while ecthyma is farthest removed, both in position and characters, from the vesicular group."



one was attacked with variola, others with varioloid, and others with vesicular varicella.

2. A varicellar epidemic is never observed to occur without cases of variola and of varioloid; nor a variolous epidemic ever to prevail without cases of varioloid and varicella making their appearance; all are effects of the same medical constitution. As to the relative proportion of the different species of eruption, it would be difficult to come to any precise conclusion at present. The French practitioners at first, only recognized two species of variolous eruption—variola and varicella; whilst in England, two varieties of varicella—chicken-pox and swine-pox, and subsequently several others, as horn-pox, hives, &c., were described. Odier and other observers, without fixing the precise number, have admitted several kinds of varicella; others, Lavit and Berard in particular, have regarded these diseases as anomalous variola; lastly, it is only of late that another variety of varicella, more akin to legitimate variola, than any other eruption,—the varioloid, has been accurately described. Although, then, the proportions of these different species of eruption cannot be estimated in any even of the more recent variolous epidemics, their association, and their development under the influence of the same cause, are not the less incontestable.

3. Variolous epidemics are occasionally varicellar at their beginning and termination, and truly variolous between these periods.

4. In a single individual attacked with true variola, we occasionally perceive the whole of the varieties of form and appearance which are ever presented by the variolous eruption, to wit: umbilicated, globular, and conoidal pustules, papular rashes, and vesicles.

5. The inoculation of variolous matter has occasionally given rise to the evolution of varicella,<sup>1</sup> that is to say, to an eruption, the natural cure of which took place on the eighth or ninth day, without secondary fever.

6. As to vesicular, varicella, or chicken-pox, the truly variolous nature of which has been most keenly contested, Dr. Thomson has demonstrated from facts, on the one hand, that healthy persons brought into contact with individuals labouring under this form of disease, have caught the true small-pox; and, on the other, that exposure to the contagion of variola, has given occasion to the development of chicken-pox.

7. With regard to the symptoms in variola, varioloid and the other varicellæ, the analogy is complete in every particular, during the periods of the incubation and of the development of the eruption. And we see, in fact, that if the pustules of a variolous eruption begin to dry up from the fifth to the sixth day, the greater number of practitioners will style the disease *varicella*; if they do not begin to decline before the seventh or eighth day, the disease will be pronounced a *varioloid*; and if they continue in a suppurating state for some days longer, the disease will be entitled *variola*; the principal difference evidently lies in the longer or shorter duration of the disease. But this is no essential difference; for we see that confluent variola, distinct variola, and inoculated variola, have not all the same course, nor especially the same periods, and yet they are very certainly of the same nature, seeing that they readily spring the one from the other.

8. To conclude, variola or true small-pox, the varioloid or modified small-pox, and the varicellar eruptions—chicken-pox, horn-pox, &c., are the varied effects of the same cause; for under certain conditions they may all be seen arising the one from the other.<sup>2</sup>

405. Nevertheless, many writers insist on separating several of these eruptions from variola. They support their views by statements and facts, of which I shall give a summary.

1. During the prevalence of a variolous epidemic, it is extremely difficult to ascertain precisely whether the development of this affec-

tion in an individual brought into contact with another labouring under varicella, be the effect of the communication, rather than of the epidemic influence which then engenders the disease on every side.

2. Vesicular varicella is not transmissible by inoculation, and is never observed giving rise to variola.

3. Those who believe varicella to be contagious, have confounded this affection with the varioloid, or modified variola.

4. Varicella occurs among those who have never been vaccinated, and who have never had small-pox; it cannot consequently be viewed as a variola modified by the previous existence either of this disease or of cow-pox.

5. Vaccination practised a short time after the disappearance of varicella, runs its course in the most regular manner; a circumstance which never happens when vaccination is performed after small-pox.

6. Variola often prevails epidemically, without being accompanied by varicella; and, on the contrary, this last affection may reign as an epidemic without being attended with small-pox. Thus, between 1810 and 1823, no cases of small-pox were observed at Copenhagen, and yet Dr. Moehl<sup>3</sup> informs us, that varicella appeared there almost every season.

7. Lastly, the characters of the eruption, and the symptoms of varicella differ essentially from those of variola.

406. I shall discuss these objections one by one.

1. It is not only during the epidemic prevalence of a variolous disease, that varicella or chicken-pox has been observed to give rise to variola; but under other circumstances which render the fact more conclusive and altogether without reply: "no case of small-pox had occurred in this town (Kirriemuir) for nine years, till last winter; when an idle boy, who was in the habit of wandering about the country, happened to be at a house where some of the inmates were said to be ill of the small-pox. He himself had been vaccinated some few years before. On his return home he was seized with febrile symptoms, and confined two or three days to his bed, when an eruption similar to chicken-pox, made its appearance. Immediately the fever abated, and in a few days more he left his bed and attended a cattle market, half a mile distant from the town, without any bad consequences. About a week afterwards one of his master's children was taken ill, and went through the regular stages of small-pox in a mild manner; then a second, similarly; a third suffered in a very alarming degree from the confluent kind; a fourth worse than the two first, and the youngest, of eight months old, had what, if the other cases had not occurred, I should without hesitation have called chicken-pox, for there was little or no fever, the pustules were filled with a watery fluid, which was not converted into the purulent appearance of small-pox. None of these children had undergone vaccination."<sup>4</sup>

2. The second objection is not better founded: several experiments prove incontestably that chicken-pox may be transmitted by inoculation.<sup>5</sup> It is true, indeed, that the inoculation of the matter of the

<sup>3</sup> De varioloidibus et varicellis, 8vo. Hafn., 1827.—Bullet. des sc. med. de Feruss. t. xiii. p. 47.

<sup>4</sup> Letter of Mr. John Malloch, Surgeon, to Dr. John Thomson, in his account of the varioloid epidemic, 8vo. Lond. 1820.

<sup>5</sup> The results of the experiments made up to the present time, upon the inoculation of the varicellæ may be arranged under three heads:—

1. The first includes those cases in which the inoculation was without effect, and these are the most numerous. Brasdor in reference to two children (Anc. Journ. de médecine, t. xlix. p. 308). Freteau, also in reference to two children (Journ. de méd. et de chir. par Corvisart, &c., t. ii. 1801). Thourer experiments on five children (Journ. gén. de médecine, t. xi. p. 132). Valentin (Journ. de médec. t. xiii.) The vaccine committee of France, in its report for the years 1806 and 1807; Bremer (Horn's archiv. für med. Erfahrung, 1801, p. 307); Chaussier, in report of vaccine committee of France, for 1813; Fontanelles in his descrip. de la vaccine qui a régné épidémiquement à Milhau en 1817, Montp. 1818, p. 39; Bryce, thirteen children inoculated who had no eruption, in Thomson's account of the varioloid epidemic, 8vo. Lond. 1820, p. 73; fourteen experiments without results, by Bartlett (in Edin. Med. and Surg. Journ. Oct. 1818); seven similar experiments by McIntosh, in Thomson, op. cit. p. 221; Carmichael, in Thomson's hist. sketch of the small-pox, 8vo. Lond. 1822, p. 277; Jackson (in Lond. Med. Rep. xv. p. 21); Heim (in Horn's archiv., Jan., 1825); Hesse, from whom these results are borrowed, thirteen fruitless experiments (in Allgem. med. annalen des xix. Jahrhunderts, June, 1828, p. 721).

2. The second comprises those cases in which inoculation was followed by a local eruption; cases of this description have been recorded by Willan (on vaccination, 4to., Lond. 1806); by M. Fontanelles (op. cit.) in two children; by McIntosh (in Thomson's acct., &c., cit. p. 113), on two children; and three cases are reported by Hesse (loc. cit.)

<sup>1</sup> Mr. W. Maxwell has reported that by inoculating with the virus of variola, he procured very slight eruptions without fever, which completely dried off on the eighth day, leaving no cicatrices.—Exp. on variolous inoculation, Edin. Med. and Surg. Journ., vol. xxii. p. 9. Dezoteux and Valentin also describe an inoculated variola, entitled by them the *brief species*, the duration of which is precisely the same as that of the varicellæ. Traité de l'inoculation, p. 223, 8vo. Paris, an. viii.

<sup>2</sup> I shall, by and by, have occasion to quote a remarkable fact in support of this assertion; others may most probably be found in a dissertation of Reil, and in a work of Stoll, copies of which I have not been able to procure. Reil. Diss. variolarum spuriarum ex verarum pure ortus. Halæ, 1792.—Stoll. Versuch einer medicinischen Beobachtungskunst (variola spuria veram producentes).



chicken-pox never communicates variola; but this circumstance does not annul the preceding fact, in which the inoculation is performed in another way; besides, the serous fluid of the pustules of variola not yet arrived at their height, when inoculated, does not always communicate small-pox, and this fact does not destroy their truly variolous nature, which even at this period is incontestable. Moreover, is it demonstrated that the fluids of the conoidal and globular pustules, or of the vesicles which are observed on some parts of the surface of almost every individual labouring under small-pox, communicate or transmit this disease with the same energy as the matter of the umbilicated pustules?

3. To say that those who consider vesicular varicella or chicken-pox to be contagious, have mistaken this disease for the varioloid, is to dispute the contagious nature of the chicken-pox, a fact experimentally proved, and gratuitously to suppose a serious error in diagnosis.

4. If varicella appear in persons who have never been vaccinated, this fact is not more extraordinary than that of the well-attested development of the varioloid, the variolous nature of which is not disputed, among individuals who have neither been vaccinated nor inoculated, nor had the natural small-pox.

5. Vaccination performed after chicken-pox, is undoubtedly most generally followed by regular cow-pox; but is it well ascertained that those who have had chicken-pox contract cow-pox and small-pox as readily as those who have never had this disease? During a variolous epidemic, individuals attacked with varicella rarely catch the small-pox; what is the reason of this?

On the other hand, it is incorrect to say that vaccination can never be developed in an individual who has had small-pox or varioloid.

6. What inference can be drawn from the fact of the course of varicella being always the same, whether the disease happen before or after the small-pox? Is not the course of the inoculated varioloid, or of the varioloid contracted by an individual during a variolous epidemic who has neither had small-pox nor cow-pox, the same as that of the varioloids observed among the vaccinated?

7. I deny, for my part, positively, that variola often prevails epidemically without being accompanied by varicella. As to those varicellar epidemics, independent of the cause of variola or of varioloid, which are admitted by Eichhorn<sup>1</sup> and several other authors, I do not remember to have met with a single well-attested instance of such an occurrence; the whole that are upon record have been observed during the prevalence of variolous medical constitutions.<sup>2</sup>

During the varicellar epidemic which prevailed in the Norwegian bailiwick of Smaalennen, in 1819, Dr. Holst<sup>3</sup> observed that the disease occurred both among those who had had small-pox and who had been vaccinated; about the same period a variolous epidemic broke out in the country around Christiana; in the epidemic of Milhau,<sup>4</sup> variola prevailed conjointly with varicella, and this connection has been ascertained to subsist in a very great number of variolous epidemics.

8. To say that the symptoms of varicella are essentially different from those of variola is absurd, inasmuch as the same eruption in a multitude of cases<sup>5</sup> has been considered as *varicellar* by some, and as *variolous* by others.

3. The inoculation of varicella lymph, has produced a general eruption in those cases related by Dimsdale (on inoculation, *Samml. auserles. Abhand. Bd. vii.*) by Mumsen (*Acta Hafniensia*, vol. iii. p. 33); by Heim (*loc. cit.*, and in Horri's archiv., Jan. and Feb., 1825); by Salmon and Willan, in the work of the latter on vaccination; by Fontaneilles (*descript. de la varicelle qui a régné épidémiquement à Milhau*, 8vo. Montpel., 1818, p. 81); by Dr. Thomson (*an acct., &c.*, p. 113); by Carmichael (*loc. cit.*) and by Hesse, in a case which he details in the publication already mentioned.

<sup>1</sup> Eichhorn (H.). Ueber die Behand. und verhütung der contagioes fieberhaften Exantheme, 8vo. Berl. 1831, p. 437.

<sup>2</sup> Thus in the varicellar epidemic of Copenhagen, described by Moehl, if no cases of variola were seen, many of varioloid were encountered. The varicellar epidemic, whose history is related by Mr. Barnes, was preceded several months by legitimate variola; and it is not shown that cases of varioloid were not observed at the same time with chicken-pox (see vesicular varicella).

<sup>3</sup> Bulletin des Sciences Médicales de Férussac, L. xiii. p. 46.

<sup>4</sup> Fontaneilles. Description de la varicelle qui a régné épidémiquement et conjointement avec la variole à Milhau (Aveyron) en 1817, 8vo. Montpellier, 1818. Vide also Valentin. Epid. varioleuse et pseudo-varioleuse (*Arch. génér. de médec.*, t. vii. p. 602).—Black (James). Obs. on small-pox, natural and modified, as they appeared at Newton-Stewart. (*Edinb. Medic. and Surg. Journ.*, vol. xv. p. 37.)

<sup>5</sup> M. Bousquet has given several instances in his *Traité de la vaccine et des erupt. varioleuses et varioliformes*, 8vo. Paris, 1833.

To sum up, then, none of the objections to the theory according to which variola and varicella depend on the same cause, appear to me of any weight; none of them cast a doubt upon the fact of the common origin of variola and varicella under the same epidemic influence, and especially that of the mutual and reciprocal development, in certain circumstances, of the one by the contagion of the other.

## VARIOLA.

Vocab. *Small-pox, Variola.*

407. Variola is an acute contagious inflammatory disease, proclaimed on the external surface of the body, in the course of the third or fourth day from the invasion, by an acuminated eruption, which arrives at its height between the seventh and eighth day, having in the mean time become pustular and umbilicated or depressed in the centre; the pustules after this still continue in a state of suppuration during a secondary fever of several days' duration; they then dry up and become covered with scabs, which finally, falling off towards the end of the third, and occasionally of the fourth week, leave small, irregular, and generally permanent cicatrices on the skin.

There are two very distinct varieties or kinds of small-pox: the one is known under the name of the *natural* small-pox, the other is the *inoculated* small-pox.

408. The *natural* small-pox presents four well-marked periods: that of *incubation*, that of *invasion*, that of the *eruption*, and that of the *desiccation*. In one instance the pustules are exceedingly numerous, agglomerated as it were, and united by their corresponding edges (*confluent small-pox*); at another the pustules are fewer in number, and are distinct or scattered singly over the whole surface of the body (*distinct or discreet small-pox*).

409. *Symptoms.*—First period.—*Incubation.* During the course of this period, which usually lasts from ten to twenty days, no morbid symptoms, either of a general or local nature, are commonly observed.

Second period.—*Invasion.* The attack of small-pox is always accompanied by symptoms of a more or less serious character. It is frequently marked by shivering fits which recur irregularly, by a subsequent rise of temperature, with dryness of the skin, or a disposition to sweating; there are acceleration of pulse, lassitude, pains in the limbs, back, loins and epigastrium; nausea and vomiting are common; the patient complains of violent pain in the head; he feels sunk to the earth, and is drowsy and restless. Among children, a state of somnolence is very common, and then they awake frequently with a start; or they are restless and toss about without shutting an eye, moaning pitifully. In some cases the face is flushed, and the patient might be believed on the eve of some cerebral affection, especially when the vomiting is troublesome, and the epigastric region continues free from pain on pressure, a suspicion which seems at times to gain in likelihood by the agitation of the patient and the convulsive twitches which often take place in the lips, the muscles of the face, or those of the body at large. To form a true estimate of these preliminary symptoms, it is necessary to keep in mind the prevalent constitution and reigning epidemic.

At other times, but less commonly, the patient yawns continually, complains of an indescribable sense of uneasiness, of dyspnoea, and anxiety; the beat of the heart is tumultuous and rapid; shooting pains are felt in the chest, which occasionally become fixed in a particular point, and symptoms of pleurisy appear to be present; or the patient is attacked with cough; or this symptom, in case it exist already, becomes more troublesome and incessant.

In some cases the nausea is incessant, the vomiting frequent, the thirst great, the tongue red upon its tip and edges; the abdomen, painful in different parts, most usually at the epigastrium, may be tumid and generally sensible to pressure, in which case we have often cerebral symptoms, a state of stupor, great prostration of strength, &c.

These various symptoms most usually occur independently of any local and primary lesion; they often appear simultaneously, as if all the systems of the economy were affected together.



In some bad cases the skin and origins of the mucous membranes present diffused ecchymoses or circumscribed livid spots before the appearance of the eruption (*variola nigræ*). Passive hemorrhages then frequently occur by the different natural passages, and are occasionally so general that the blood transudes by almost every abraded point of the body,—from the surface of blisters, for example, and from the bites of leeches, when any happen to have been applied.

These various phenomena, in sum, which appear before the eruption, may be combined in so many different ways, and run so completely into each other, that it is often difficult to distinguish upon which of the organs or systems the variolous virus has acted with the greatest intensity.

These properly precursory symptoms may cease with the appearance of the eruption, or continue during the whole course of the disease to its decline. It may even happen that a severe febrile paroxysm, accompanied with continual delirium and extreme restlessness, may cut off a patient in the course of a few days, whether the eruption have made its appearance or not. These initiatory symptoms most generally cease or abate when the eruption appears and is regularly developed; if they continue, they indicate the danger, already imminent, to be still greater.

Third period.—The eruption is speedily accomplished, especially when it appears after the occurrence of hemorrhage. From the second to the third day of the invasion, small and papular-looking spots which rise above the level of the skin, make their appearance. On the face they are commonly very numerous, and either greatly crowded together, or united by their bases and arranged in clusters (*variola coherentes*; *variola corymbosæ*). These have all a slightly livid tinge.

The eruption is occasionally preceded by a very extensive erythematous efflorescence of the face or trunk; in this case it is always confluent. The pustules show themselves on every part of the body,—in the mouth, pharynx, larynx, &c., as well as over the integuments. The face and neck swell in the same manner as in erysipelas; the patient complains of violent pain in the throat, and deglutition is performed with difficulty. Many white points, isolated or crowded together, appear on the membrane of the mouth, which is red and injected. The cough, which was hoarse at first, becomes dry, hard, painful and tearing; the voice, which was also hoarse at first, grows weaker and weaker, and is at length entirely lost. The restlessness and sense of anxiety continue, but there are not such marked symptoms of dyspnoea as in croup, which is further distinguished by a laryngo-tracheal whistling sound, not heard in small-pox.

At other times the eruption, having been preceded by symptoms of little severity, is evolved without any untoward accident; and it is in the passage from the second to the third period, that gastrointestinal affections, and especially a true dysentery (*variola dysenterica*, Sydenham), or, otherwise, variolous bronchitis, pleurisy, pneumonia, &c., are apt to intervene and cloud the prospect of a happy termination to the disease. Pneumonia occurring under such circumstances is, in one case, proclaimed by characteristic and decided symptoms; in another, and more dangerous instance, it is completely masked, and then it has often disorganized the lung by its progress, before even its existence is suspected. In the greater number of cases pneumonia interferes with the due development of the cutaneous eruption, and this complication is one of the most frequent causes of those irregular variolas which usually prove fatal, and which, by the older writers, were characterized as cases of *malignant* small-pox,—cases in which the evolution of the pustules was suspended, in which they became flaccid, and were mingled with sanguinolent bullæ, and in which the suppurating stage was slow of setting in.

Fourth period.—*Suppuration*. (Seventh or eighth day of the eruption.) An interval of four or five days divides the period of eruption from that of suppuration. During this time the small red papular spots of small-pox increase in size, and soon present a sort of flattening of their summits, followed by a central depression, by which each pustule assumes an umbilicated appearance. If the structure of the pustules be studied at this period, they are found to contain a little serum and a small disc of a whitish substance, which is very soft at first, but soon increases in consistency. On the third day of the eruption the central depression is very conspicuous in the greater number

of the pustules; their umbilicated aspect becomes more and more marked as they increase in size, and as the period of suppuration approaches; they are whitish in colour, and are surrounded by an areola of a red, or purplish red colour. When the pustules are confluent, or are clustered together in patches, these middle depressions are rarely perceived; from the second or third day the face then appears covered with a continuous sub-epidermic whitish pellicle,—a kind of membranous exudation, similar to that which is observed at the bottom of isolated pustules.

It is at this stage that the fever runs highest, and the most serious complications are observed to occur. The integuments generally appear swollen; those of the face, where the puffing is always considerable, are more especially affected. Delirium, or a drowsiness more or less oppressive, is occasionally observed. The vomiting may be obstinate, and attended with severe pain of the epigastrium; diarrhoea makes its appearance or increases. The character of the cough shows that the eruption has implicated the mucous membrane of the air-passages. A pyalism, whether there have been pustules on the mucous membrane of the mouth or not, now sets in and commonly becomes profuse. This symptom, indeed, often appears before this period, most usually showing itself between the third and seventh day of the eruption, at the same time as the swelling of the face, along with which it also declines. The pyalism may be accompanied by some difficulty of swallowing; it is a symptom which does not occur among children.

The number of pustules frequently bears no proportion to the excessive swelling of the face. The tumefaction often extends to the subcutaneous cellular substance to the neck and cranium. At this period the pustules look turgid with pus and centrally depressed on the trunk and limbs, where they are less numerous than on the face, except in those cases in which they become confluent on the inner sides of the thighs and on the buttocks, an event that is more particularly apt to befall young children, in whom these parts are habitually wet and irritable from the contact of the urine. Upon the parts just mentioned the pustules usually run their course more rapidly than elsewhere.

The presence of pustules upon the eyelids causes great irritation and very violent pain; those that are evolved on the mucous membrane of the mouth advance rapidly; in the larynx they are more tardy in their progress. In proportion as the pus is secreted, the pustules lose their flattened appearance and central depressions, and become more rounded and globular. When they are at no great distance from each other, the intervening spaces are red and swollen, and the patient complains of an extremely painful feeling of tension in the skin.

When the disagreeable symptoms which are often observed during the first stage, occur in this, the pustules rarely suppurate freely; the pustules are flaccid, and their areolæ look pale; or otherwise they become filled with a bloody serum and assume a livid hue; petechiæ appear in the spaces between them, large flaccid and bluish phlyctenæ are evolved (*variola confluentes crystallina*, Burserius), and passive hemorrhages takes place.

Fifth period.—*Desiccation*. This process almost always begins in the face; this part, indeed, is often completely covered with scabs, before the pustules on the lower extremities have attained their full maturity. The swelling now subsides, the pustules dry up, and the scabs that follow seem but to form one continuous incrustation over the face. The features are then hidden beneath a thick, brown-coloured mask, which falls off on the fifth or sixth day from the date of its formation, and is succeeded by a furfuraceous desquamation, the scales of which are several times renewed. The scabs in very confluent cases remain soft and moist. The patients exhale a peculiar faint and sickly smell; they complain of pain and tension in the integuments till the crusts are detached, an event that happens between the fifteenth and twentieth day from the attack of the disease. The pustules frequently ulcerate; their surface bleeds and becomes covered with black scabs. When these sores spread superficially and extend to the whole thickness of the corion, they are always followed by unseemly cicatrices in the event of the patient's recovery. At the same time the linen of the patient and the furniture of the bed are more or less soiled by the exudation of purulent matter from different parts of his body.



A pruritus of some intensity accompanies the formation of the scabs, and often induces patients to tear themselves with their nails. In children especially, black, bleeding, and excoriated points which are due to this cause, may often be observed on the face.

In some rare cases, there is neither any desquamation nor formation of scabs; the pustules sink in the course of eight and forty hours; there is then probably absorption of pus into the system; for a sudden prostration of the powers coincides with the shrinking of the pustules, and the phenomena observed, are in other respects analogous to those that occur in the animals into whose veins purulent matter has been injected.

Fever of great severity and violent cerebral symptoms may occur at this period; convulsions and profound coma, when they supervene, are speedily followed by death.

When the scabs are completely thrown off, the surfaces are covered, have a vinous-red tint, which only disappears with extreme slowness. In proportion as this red tint fades, the pits or scars left by the disease, become continually more apparent. These are always more numerous on the face than on other regions of the body, and there occasionally form a succession of seamed and puckered cicatrices which disfigure the countenance dreadfully. (a)

(a) The following brief description of small-pox, being the result of very ample opportunities of observation enjoyed by me in the epidemic, as it presented itself in Philadelphia in 1823-4, may not be without interest to the readers of these pages.

"In the premonitory symptoms, constituting the characters of the fever precursory to the eruption, there was considerable uniformity: the complaint of nearly all those attacked being at first chills and rigors; pains in the loins, head and limbs, with thirst and want of appetite; with which were soon associated gastric uneasiness, and in many, soreness of throat, rendering deglutition painful, hoarseness and weeping eyes. The duration of these symptoms, aggravated by febrile exacerbations, varied from one to three days, more usually the latter, after which the eruption begins to appear. It is first seen round the forehead and temples, near the hairy-scalp; then on the cheeks and breast and back; on the arms near the shoulders; the abdomen and thighs; and subsequently on the forearms and hands, and finally on the legs and feet. The appearance of the eruption is that of red or scarlet papulæ, presenting to the touch a sensible resistance, but not much raised, and without roughness or hardness. These papulæ, becoming more and more defined and elevated, are after a day or two converted into vesicles, with small elevated centres or bodies of a yellowish-white, and more diffused red and somewhat hard bases or margins. The redness extending as the eruption becomes copious, converts the skin, especially of the face, neck, and hands, into a red ground, from which project, in relief, the whitish vesicles. Similar appearances, but of a less marked nature, owing to the eruption being more scattered, are found on the trunk. The vesicles containing at first a thin, semi-transparent fluid, become gradually larger, fuller and yellower, and filled with a thick tenacious matter. This change is completed, and the pustules are entirely formed, after a lapse of time from the first eruptive effort, which varies from the fifth to the ninth day, and is occasionally longer. The mean for the beginning of maturation, or the finishing of the secretion of matter in the pustule; may be received as five days for the face, and eight or nine days for the body generally. The stages of the eruption, as regards its appearance, may be very properly called papular, vesicular, and pustular. This last having attained its height, completes what is termed the period of maturation, during which the pustules retain their fulness and spheroid figure, and exhibit the greatest proportion of whitish-yellow shining surface of their body, and diminished extent of redness at their base. A yellow dry point on the summit of the pustule, which loses thereby somewhat of its former spheroidal shape, by becoming flatter, or slightly indented, indicates beginning desiccation, at which time the body exhales that peculiar odour so unpleasant and so readily recognizable after it has once been perceived. There is no uniformity in the size of the pustules on the body generally, nor any equality among them on a particular part; more usually one larger and fuller is surrounded by others less so. Nor is it to be supposed that the changes above mentioned are gone through in regular suc-

The *diarrhœa*, when it has been present from the beginning of the disease, as often happens in children, continues, or becomes more profuse during this stage; occasionally the evacuations are even sanguinolent; or otherwise the cough becomes more troublesome, and a *pneumonia*, more or less decidedly characterized is set up. These different affections always correspond in severity with the nature of the variola, and the constitution of the individual. After the detachment of the crusts, especially among children, it is less common to witness subsultus of the tendons, convulsions, drowsiness, coma, or any approach to the apoplectic state.

It is at a generally somewhat advanced period of this stage that what are styled *nervous* symptoms commonly appear. These have been referred to cerebral irritation; but they occur more regularly than in true meningo-cephalitis, and they bear no relation to the swelling of the face, which by this time has disappeared. This is also the stage of the disease at which *OPHTHALMIA* so frequently supervenes. It is often difficult to learn whether this affection be pustular or not; because, whilst the eyelids are swelled, the presence of pustules upon the conjunctiva cannot be ascertained, and at the period when the tumefaction of the eyelids subsides, the pustules are resolved. The course of ophthalmia occurring under such circumstances, is insidious: within an interval of twenty-four hours the cornea has been found softened and opaque, in cases where previously no trace of injection had been perceived. In other cases this

cession on all parts of the surface, uniformly. It was no uncommon thing to see the eruption papular on the legs, vesicular on the trunk and arms, and pustular on the face, at the same epoch. One part even, as the arm for instance, has exhibited to us the three forms at the same time.

"Maturation complete and desiccation going on, the pustules break, and have their thin coverings converted into a yellow hard coat or crust, to which adheres the pus that was not removed by absorption, and the residue by evaporation of its watery part, is now converted into a scab of varying thickness, firm and prominent in its centre, and made up outwardly of concentric circles. The margins of the pustules, before of a distinct red, now assume a bluish-red or purplish-colour, and the skin begins to desquamate.

"The constitutional sympathies, or the symptoms in the milder and regular variety of the disease, are not of any great violence or intensity. The premonitory pains, diminishing or disappearing, after the coming out of the eruption, leave in their place a regular fever. The action of the heart and capillaries is hurried during the papular and vesicular stages; but becomes more equable while maturation is going on. During the former period, the loaded and not unfrequently furred tongue evidences disordered stomach, the cravings of which are for cold drinks. The somewhat laborious respiration may, in some cases, depend on the swelling and soreness of the fauces and pharynx; in others, on the eruption extending along the lining membrane of the larynx; whilst in others, it may be caused by bronchial engorgement."

"The febrile symptoms which abate during the process of maturation, are apt to return during desiccation; and when the skin begins to desquamate, then they constitute what is called secondary fever. The skin which had suffered so much, occasionally exhibits at this time an erysipelatous blush, accompanied by an inflammation of the subjacent cellular tissue, and the formation of troublesome boils, or infiltration of serum, especially where there is much laxity of structure, as in the eyelids, cheeks, lips, &c. The cutaneous system, during and immediately after the removal of its cuticle, and much of its rete mucosum, is of course very sensible, as well to the impression of clothes as to atmospherical extremes, and particularly cold. This is with many a critical time. It not unfrequently happened that persons, who had passed through the different stages of the disease and were advancing rapidly to convalescence, were suddenly seized with an affection of the chest,—pleurisy, bronchitis or pneumonia, and speedily carried off by the violence of the inflammation. The skin, exquisitely sensible in its denuded state to atmospherical vicissitudes, transmits with great promptness the morbid impression to the lungs, already prone to take on disease, in consequence of the active part they are compelled to play during the eruptive fever."—*North Am. Med. & Surg. Journ.*, July, 1826-7.



membrane is perforated by ulceration, and a staphyloma shoots forth; small phlegmonous abscesses are now also frequently developed on the head, neck, or extremities, as are pustules of ecthyma, furuncles, and the bullæ of rupia, which are succeeded by excoriations and sores of various depths and degrees of intractability, causing sleeplessness, and wearing out the strength of the patient. Lastly, chronic inflammations of the mucous membranes of the bronchi and intestines, are the severest of all the secondary affections of small-pox, and those which most frequently protract the convalescence. Phthisis pulmonalis has in general been observed to be accelerated in its progress by the influence of variola; in a few rare cases, however, the progress of pulmonary tubercles has appeared to be favourably modified by this disease.

It occasionally happens, however, that no serious symptom is observed in the first, second, and third periods of small-pox. Although confluent, the disease seems at times to be running its course with perfect regularity, when the patient suddenly sinks and dies, without our being able to detect, from a post-mortem examination of the body, any morbid appearances sufficient to account for this rapid and disastrous termination, which is then probably owing to the fatal action of the variolous poison upon the economy at large.

410. *Distinct and benign small-pox (variola discretæ benignæ, Burserius)*, is usually preceded by general symptoms of less severity, but of equally long continuance as those of the *confluent variola*.

On the first day of the invasion, we have shivering fits, alternating with flushes of heat, general uneasiness, and loss of appetite; on the second day, distaste for food of every description, nausea, hot skin, occasionally pain of the epigastrium, especially on pressure, a sense of heat in the stomach and pharynx, great thirst, redness of the point of the tongue, the middle and base of which are covered with a white or yellowish fur; next headache, drowsiness among children, disposition to perspire among adults, frequency of the pulse and respiration, restlessness, yawning, and pain in the back and loins, joints and limbs universally.

On the fourth day, the eruption is proclaimed by a number of small red, isolated spots, similar to flea-bites, upon the lips, then on the face, chin, neck, breast, abdomen and extremities. Next day, the rash is thicker, the spots are more prominent, and apparently *papular*. Their apex then becomes *vesicular* and transparent. On the third and fourth days of the eruption, the spots appear distinctly pustular, are well defined upon the skin, and, occasionally, on the mucous membrane of the mouth, pharynx, eyelids, prepuce and female labia. The pustules of these parts differ from those of the skin; for when the epithelium covering the whitish circular spots which characterize the pustules in these situations is removed, neither serum nor pus is found underneath it.

The integuments in the spaces between the pustules are frequently red and swollen. The pustules appear hard to the touch; the fluid they contain grows thick, becomes yellow in colour, and is not long before it acquires a perfectly purulent appearance. The pustules have a well-marked umbilicated form. The swelling is greatest in the face, although the pustules are commonly less numerous there than elsewhere; this part also becomes the peculiar seat of a tensive pain and burning heat. A *secondary fever* now (fifth day of the eruption) arises, and continues during the course of the suppuration of the pustules. The swelling of the face appears at first about the upper lip and ææ of the nose; it extends in succession to the lower lip, the cheeks, eyelids, and temples. At the same time, a slight ptialism occurs, even when no pustules have been thrown out upon the mouth. This state of things continues till towards the eleventh or twelfth day (eighth of the eruption); the *desiccation* of the pustules then takes place. The swelling of the face begins to subside, and the pustules to shrink, and subsequently to dry. The scabs are thrown off on the fourteenth or fifteenth day. Those of the hands are formed and detached three or four days later. There is a particular circumstance, and it is a remarkable one, which may accelerate the progress of the pustules; this is the existence of inflammation in the parts where they are evolved. Thus when individuals labouring under psoriasis, lichen, or chronic eczema, are attacked with small-pox, those pustules which appear on the parts already inflamed, very commonly run through the whole of their stages within eight days.

After the fall of the crusts, circular red marks of a brownish-red colour, and small irregular cicatrices, which are more especially conspicuous on the face, remain. These marks are occasionally afterwards affected with a furfuraceous desquamation.

411. The distinct small-pox may be attended with very severe symptoms, so as frequently even to prove fatal (*variola discretæ malignæ, Burserius*).<sup>1</sup> In these bad cases *nervous* symptoms are often observed, as also passive hemorrhages, petechiæ, dysentery, pneumonia, &c., complications which are more frequently seen in the confluent variola. (a)

412. The *inoculated small-pox* differs in several particulars from the natural disease. This variety is produced by introducing the variolous poison into the system, by applying it to an abraded surface by rubbing it upon the skin or mucous membranes, by inserting it, in fine, by means of the puncture of a lancet under the epidermis.

During the first, and occasionally even the second day of the inoculation, no change is perceived in the punctures; on the second or third day a slight itchiness is felt, which precedes the appearance of small spots of an orange or tawny-red colour. On the third day these spots enlarge. On the fourth, the redness of the spots increases, and a sense of tingling or pricking takes the place of the pruritus; the punctures become prominent and lenticular. On the fifth, the pricking sensation is more acute; local inflammatory symptoms are more strongly marked. On the sixth, the spots contain a transparent fluid in their apices. On the seventh, they grow white and purulent, and show a depression in their centre; the pain extends along the inner side of the arm, when the punctures have been made on this member, as is usual; the spots become phlegmonous, and are surrounded by a livid areola. On the eighth, slight shivering fits take place, the skin feels hot, there is headache of varying intensity, listlessness and want of spirits, nausea, now and then actual vomiting at intervals during four and twenty hours, and drowsiness. On the ninth, the inflammation of the inner part of the arm and axilla abates, the livid colour of the areola fades; the pus is dried up; occasionally the neighbouring pustules, when more than one puncture has been made, unite and form one thick and large crust, which is detached between the twentieth and twenty-fifth day from that of the inoculation. In this case, a broad and deep cicatrice is left upon the point inoculated, very similar to that which results from an issue.

Besides the *local variola*, whose history has thus been traced, another and *general eruption* appears upon the twelfth day of the inoculation, having been preceded by many symptoms of general functional derangement, analogous to those which go before the development of the natural small-pox. A crop of pustules appears on the face, neck, trunk, and limbs; this is usually but scanty: the pustules of inoculated small-pox are rarely numerous, and still more rarely confluent. The general eruption is commonly finished on the thirteenth or fourteenth day from that of the inoculation. The pustules arise, become depressed in their centres and semi-globular, like those of the natural small-pox. A purple areola surrounds their base; they become turgid with pus; the red circle which surrounds them fades at the same time that their centres whiten; the pus assumes a yellow colour, a small black point forms in the middle of each pustule, the areola of which has now disappeared. Their surfaces shrivel at length, and the pus they contain dries up and forms scabs of a grayish-brown colour, which, falling off in due season, leave behind them spots of a deep red hue, and occasionally superficial cicatrices.

413. Inoculated small-pox is not without its varieties:—

1. The secondary eruption may not happen, and the inoculation does not then prove effectually preservative.

(a) The varieties of small-pox, deduced from its external characters, which I described in the paper already quoted, were, the *confluent*, the *roseolar*, the *tuberculous*, and the *erysipelatous*. The tuberculous variety was most common in negroes, and was distinguished by hard, rough and knotted prominences, flattened in the centre, and containing little or no pus.

<sup>1</sup> Ponticelli (Silv. Ant.). Infortunii del vajuolo e metodo di andarne al riparo, 8vo. Parma, 1761, cap. iii.—Morton. Exercit. iii. cap. vi. vii. viii.—The anomalous variolæ observed by Sydenham in 1670, 1671, and 1672 (*variolæ nigre*), must be referred to the malignant distinct small-pox.



2. More rarely, there are no pustules developed in the situations of the punctures, and the secondary eruption does not the less take place.

3. The secondary eruption may appear in several successive crops.

4. The course of the eruption may be so accelerated, that within the space of eight or nine days, the disease passes through the whole of its periods, like varicella or modified small-pox; and, on the contrary, the pustules may be more tardy in their progress than in the natural small-pox.

5. And lastly, inoculation may be followed by a variolous fever without eruption.

Inoculated small-pox, as has been said, is generally distinct. The period of suppuration is not characterized by any violent symptoms. This variety of small-pox is occasionally complicated with an inflammation of the exanthematous kind (*roseola variolosa*, 268). It is much less frequently associated than natural small-pox with serious inflammatory affections of the mucous membranes, or other accidental complications of importance.

414. *Variolous fever, (variola sine variolis)*. This variety of the variolous contagion has been pointed out by several observers.<sup>1</sup> The resemblance which the symptoms of this fever bore to those of small-pox, induced me, says Sydenham, to give it the title of *variolous fever*, which indeed seemed so much the more appropriate, as the fever raged at the same time with small-pox, and got well under the same treatment; the two diseases belonged evidently to one family; and there was no difference between them, saving that in small-pox the morbid matter was directed towards the skin in the shape of an eruption, whilst in the variolous fever this matter was expelled from the system by the salivary glands.<sup>2</sup> Several inoculators assure us, that they also have seen these variolous fevers;<sup>3</sup> and some have added, that they gave subsequent immunity from small-pox.

I have not myself observed any fever of this description; perhaps it has escaped my notice, and I have not looked for it with sufficient attention.

415. *Anomalies of small-pox, and of the variolous pustule*.—The pustules of small-pox have not all the same course; some of them advance and terminate at the usual period; others having got half or a certain way, to the tenth, eighth, sixth, or even only the fourth day, the period at which true pus begins to be formed in their interior, stop short in their progress, shrink, suppurate no farther, and instead of pus, contain but a small quantity of coagulable lymph. This variety of pustule seems to me to correspond to *papular varicella*.

In other cases, a kind of double suppuration seems to take place, or rather the period of suppuration is prolonged beyond its usual term.

The secondary fever has been said to be wanting in some cases of small-pox; these, however, ought to be regarded as cases of the varioloid or modified disease.

416. Independently of the inflammation of the mucous membranes, which ought to be held one of the elements of variola, the disease may be complicated with other affections—with measles and scarlatina, purpura, croup, and pneumonia, more rarely with hæmoptysis, meningitis, &c., which may occur before and during the eruption, or the desiccation, and after the detachment of the scabs. These complications are particularly to be dreaded during very hot or very cold seasons. The fear of death, and other violent moral affections, frequently give rise to such a state as is promptly fatal.

During convalescence, erysipelas, furuncles, and phlegmons of the legs, thighs and arms, are very commonly observed; ecthyma appears upon the extremities; chronic inflammation of the intestines, in fine, often protracts the cure, and even leads to an unfavourable termination. I shall by and by point out the best remarks that have been made in regard to these complications and secondary affections.

417. *Alterations of structure*.—The pustules of small-pox are commonly more confluent and farther advanced on the face than on other parts; they are also flatter there than elsewhere, and occasionally

form a sort of whitish layer spread over the whole face and forehead. If death occurs at a later period of the disease, the pustules are already dry upon the face, where they form a kind of bluish scab, whilst, over the rest of the body, they are still at their height. The surrounding skin continues white or very slightly tinged with violet. On other parts of the body the pustules are for the major part umbilicated; their centre, slightly depressed, is in general of a little less dead white colour than the rest of their superficies; at other times, and especially upon the legs, they are of a vinous red or dusky brown colour.

The pustules, at the period of their height, feel hard and solid under the finger. Those of the palms of the hands are usually of considerable size, slightly rounded, and without any depression in the centre; their colour is not of quite so dull a white as the pustules in general. The pustules of the soles of the feet are either not raised at all, or but very slightly so; they appear through the thick cuticle of this region, under the form of circular obscure violet-coloured spots, surrounded by a border of a deader white colour than the rest of the skin. The pustules of the penis and scrotum are usually small, and feel very firm to the touch.

Some pustules have a follicular orifice about their middle, from which sprouts a hair; the greater number, however, present nothing of the kind. On cutting them across, the following appearances present themselves: the subcutaneous vascular rete seems very much developed in places; but this is far from being invariably the case. The deep layer of the corion, in which the middle of each pustule is situated, is always very much injected, and looks as if it were suffused with blood; occasionally, indeed, it presents a red, streaked and punctuated appearance. The outer surface of the corion, in which the general surface of the pustule has its seat, is swelled, slightly transparent, and yellowish in colour. Above the corion we meet with a pseudo-membranous layer, which forms the substance of the pustule. It appears in the shape of a truncated cone, about half a line in thickness, more or less, according to the size of the pustule. It is a substance of a dull white colour, of some consistency, but rather friable, and intimately connected with the inner surface of the cuticle, with which it appears to be confounded; it is less adherent to the surface of the corion. In pustules that are farther advanced, a few small vacuities are perceived, or a waving line, or small winding cavity is seen between the outer surface of the dermis and the adventitious white layer of which mention has just been made. These intervals, or this cavity, is found full of a serous fluid. In the pustules of the face, farther advanced than those of the other regions, this fluid becomes opalescent, and is more abundant, occurring not only in the cavities of the pustules, but effused below the cuticle of their circumference. The cuticle thus raised may then be detached in shreds of considerable size. Beneath it, in situations corresponding to the pustules, a great number of irregularly rounded prominences are observed, separated from each other by sinuous furrows of the skin.

This eroded appearance of the dermis only occurs in those places that are beset with pustules in a state of suppuration. The cuticle appears thickened in some degree, but maceration shows that this is not the case.

In the situation of the beard, the cuticular canals of the hairs appear under the form of opaque white lines, traversing the substance of the skin, and ending at a species of white bulbs, bearing a pretty strong resemblance to the figure given of them by Cotugno.

418. After macerating portions of the skin of individuals who had died under small-pox, in water for several days, Mr. Young and I observed the following appearances: the cuticle was detached with the slightest touch, and always presented on its surface the *elevations* and *opaque white-coloured* spots of the pustules. This dull white was visible over the whole surface of a certain number of the pustular impressions; but in the majority it either diminished considerably or ceased entirely towards their centres, thus preserving the umbilicated character. The inner surface of the cuticle presented nearly the same appearances as depressions, which on the outer surface were conspicuous as elevations; the pseudo-membranous layer to which the pustule at its height owes its umbilicated form and dull white colour, was here found in a manner isolated and distinct. In the

<sup>1</sup> Sydenham. Opera. Sect. iii. cap. iii. p. 181, edit. Patav. 1700.—Ludwig. Instit. medicin. clinic. Pars. i. cap. i. subsect. vii. §. 167.—Azzoguidi (Germ.). Lettera sopra i mali effetti dell' inoculazione. Venez. 12mo. 1782.

<sup>2</sup> De Haen also says that this species of fever is attended with pyalism, like confluent small-pox. Divis. Febr. p. 97.

<sup>3</sup> Fouquet. Traitement de la petite-vérole des enfants, p. 123, 12mo. Paris, 1772.—Gatti. Nouvelles reflexions sur la pratique de l'inoculation, 12mo. Bruxelles, 1797.—Dézoteux et Valentin. Traité de l'inoculation, p. 297.



hollows, indeed, a kind of disc or ring of a whitish, pseudo-membranous matter was found, which could easily be removed by scraping; the cuticle always remained a little depressed, but it preserved nearly its natural appearance. The piliferous ducts which passed through several of these discs, were whiter, larger, and more conspicuous than those that were visible upon the surrounding cuticle.

The annular disposition of this white substance was particularly remarkable in the pustules of the soles of the feet. Here too the false membrane, stopping abruptly at the circumference of the pustule, produced the white border which we had remarked during life. The outer edge of this pseudo-membranous ring was more prominent than the inner margin, so that a kind of cupped appearance was produced, and a piece of the cuticle of the sole of the foot, pretty numerous beset with pustules viewed from the inside, bore a strong resemblance to the surface of a laden honey-comb. When this false membrane was removed, the inner surface of the epidermis looked of a very faint whitish colour; an appearance which might perhaps be ascribed to the presence of the deep epidermic membrane.

The skin of the palms of the hands presented the same appearances, but these were here less strongly marked.

The outer surface of the dermis or corion, in those places corresponding to the centres of pustules, exhibited rounded eminences which contrasted strongly, by their yellowish colour and semi-transparent appearance, with the tint and character of the rest of the skin. These elevations were always of smaller dimensions than the alveolæ of the epidermis with which they were in relation. Around several of them a linear depression could be perceived, produced by the impression of the outer and prominent edge of the pseudo-membranous substance; it was observed more especially on the soles of the feet, where the outer rims of the discs, here slightly flocculent, were nearly half a line in thickness. These eminences, examined with the magnifier, presented the slight superficial grooves which separate the papillæ of the corion. This feature was especially remarkable in the palms of the hands and soles of the feet, situations in which the papillæ appeared to be increased in size.

This appearance was the same as that which was evident in the interior of the greater number of the pustules when arrived at their height; but in several pustules, farther advanced, the surface of the corion, instead of presenting these papillary risings, was on the contrary, more or less depressed; nevertheless, a slight elevation could still be discovered in the centre of a great many of the depressions. To conclude, the skin was in some places manifestly eroded.

The elevations observed in the pustules of the outer surface of the corion were softer, and much more affected by prolonged maceration (during a month) than the other parts of the skin. In the situations where they had existed, a brownish and soft depression was discovered, contrasting strongly with the dull white of the rest of the dermal tissue.

On examining those variolous pustules which had been touched with caustic very shortly after their development, during life, we found the crusts and squamæ of a deep brown colour, somewhat depressed, and dry on the exterior; their inner surface was yellowish. Under these squamæ the corion appeared to be more eroded than in other parts of the body.

To conclude, the size, the colour, and the umbilicated depression of the pustules of variola depend evidently on the pseudo-membranous disc, secreted by the papillary body, inflamed and elevated in the form of a zone, in the places occupied by the pustules.

When two or three pustules happen to have become united by their corresponding edges, the anatomical characters of each of the several pustules are often perceptible in the group. Scattered among the true variolous pustules we also frequently perceive *conoidal* or *globular* pustules precisely similar to those which characterize two of the varieties of *pustular* varicella. In fine, the skin of the face and posterior parts of the trunk is usually very much injected. (a)

(a) "The form of the pustule of small-pox is strikingly modified in reference to the seat of its development. Thus, on the face, where the pustules advance very rapidly to maturity, they are flat, and non-umbilicated. On the palms of the hands, and on the palmar surface of the fingers, they rise gradually from the surface, are but little raised

419. The *mucous membranes* present alterations which are not less remarkable than those of the skin. The conjunctiva, the mucous membranes of the nasal fossæ, mouth, pharynx, larynx, trachea, and bronchia, of the prepuce in the male and labia in the female, &c., are usually injected, and exhibit traces or rudiments of pustules. The nasal fossæ, of a bright red colour, are covered with thick mucus; the arch of the palate and upper surface of the tongue present gray pseudo-membranous exudations, or small flocculi of the epithelium. The mucous membrane of the mouth is of a livid red, and shreds of the epithelium and a gray pseudo-membranous deposit are observed as far as the eye can penetrate, hanging from the velum palati to the aryteno-epiglottidean ligaments. In cases of confluent variola, the interior of the larynx and trachea also presents unequivocal signs of inflammation: the mucous membrane is of a violet hue, with whitish or grayish points scattered over it, circular in shape, and varying from half a line to two lines in diameter, having a red, central point, without any epithelium, and several other spots, irregular in their shapes and of various sizes, probably consecutive to groups of coherent pustules. Whilst examining the body of a woman who had died on the fourth day of the eruption of a confluent small-pox, Chaussier<sup>1</sup> found a great number of pustules in the larynx and trachea *similar in size and shape to those which existed on the skin*. These pustules were not confined to the larynx and trachea; several were even found in the *principal ramifications of the bronchia*, on the inside of the mouth, on the pharynx and upper part of the œsophagus. I must, however, add to this statement, that in my own experience I have always found the variolous pustules of the mucous membranes differing in many respects from those of the skin. Thus I have never seen pustules in the larynx, trachea, and bronchia, *precisely similar* to those of the skin; that is to say, formed of a pseudo-membranous disc, with purulent matter deposited between the corion and cuticle; farther, the variolous pustules of the mucous membranes never become incrustated, and in several, the pseudo-membranous deposit is not even covered with an epithelium; lastly, they are not generally succeeded by visible cicatrices.

I have never seen variolous pustules in the œsophagus, stomach, or intestines; but I have observed that these parts were always inflamed in a greater or less degree. Cotugno informs us that he saw well-characterized variolous pustules on the mucous membrane of the rectum, in a case of prolapsus of this part;<sup>2</sup> in such cases, however,

above the level of the surrounding skin, and are also non-umbilicated. On the soles of the feet, again, they are large in extent, and still more flat than the preceding, appearing like purplish disks with a distinct white margin, and non-umbilicated. Usually, the umbilicated centre presents a reddish or brownish tint, and sometimes, though rarely, it is perforated by the shaft of a hair.

"When a well-formed and mature pustule is examined by dissection, it is found to be divided in its interior by a transverse septum into two chambers, both containing pus. The upper chamber is the larger of the two, and they communicate with each other, to a greater or less extent, by the rupture of the transverse septum around its marginal border. The epidermis, forming the superficial boundary of the pustule, is the segment of a sphere, and continuous by its circumference with the cuticle covering the adjoining skin. The transverse septum is a layer of false membrane, of a whitish colour, which was deposited on the dermis at an early stage of the pustule. Subsequently this layer becomes separated from the dermis, and raised by the formation of pus beneath it, and at the same time it is broken around its edges, and permits the pus of the deeper cavity to communicate with that already contained in the superficial chamber. In consequence of the peculiarity in the mode of its production, this layer of false membrane generally retains permanently the umbilicated form of the primitive pustule, and is thinner at the centre than towards its circumference. When this septum is removed, the deep chamber is brought into view, and the depressed and sometimes ulcerated base of the pock exposed. The surface of the base is of a bright or purplish red colour, and highly vascular." Wilson (*op. cit.*).

<sup>1</sup> Bulet. de la faculté de med. de Paris, 8vo. t. iv. p. 14.

<sup>2</sup> De Sedib. Variolar. p. 152, 12mo. Viennæ.



it is well known that the mucous membrane approaches the skin in its structure.

The mucous membrane of the stomach and bowels frequently presents spots of extravasated blood, and its follicles are enlarged and more than usually prominent; ecchymoses are also seen in many cases in the substance of the intestinal parietes, especially in *variola nigra*. The follicles of the mucous membrane of the great intestines are remarkably enlarged, of a violet colour, and flattened or projecting, when symptoms of a dysenteric nature have accompanied the disease.

420. In some subjects the blood has been found fluid, serous, and apt to penetrate the tissues; bloody effusions have also been observed in the subcutaneous and sub-serous cellular membrane, and in the substance of the corion; as also petechiæ and ecchymoses of the stomach; a sanguinolent loading of the lungs (*variola nigra*); and a remarkable pale and flaccid state of the heart, on the inner surface of which, small circumscribed violet or red-coloured spots have occasionally been discovered.

Gendrin<sup>1</sup> relates that having injected the blood of individuals labouring under confluent small-pox into the veins of animals, very violent and rapidly fatal symptoms were induced, and that on opening the bodies after death several organs were found very much inflamed.

It is more rarely that we meet with alterations of other viscera. In some small-pox patients who exhibited symptoms of meningitis, the membranes of the brain have been found to be injected, and effusions of a limpid or sanguinolent serum to have taken place between the convolutions, and into the ventricles of the brain, as well as the arachnoid membrane of the spinal cord. M. Berard found the arteries very commonly stained of a red colour in an epidemic variola which prevailed at Angers among a detachment of recruits. Messrs. Rigot and Trousseau<sup>2</sup> tell us, that having been present at the dissection of a great number of subjects who had sunk under small-pox, they almost uniformly observed a red colour of the blood-vessels, but in no instance did they find the parietes of the arteries thickened so far as sensibly to diminish the capacity of their canals. M. Tanchou<sup>3</sup> had before this period called the attention of pathologists to this red state of the arteries, which he attributed to inflammation. Upon one occasion, in 1826, when discharging for a time the duties of M. Bailly, at the Hôpital de la Pitié, I had several opportunities of observing this redness of the vascular parietes, which in the greater number of cases appeared to me to have taken place after death, and to be due to a particular state of the blood. I have, however, occasionally seen a redness of the arteries occurring in long patches, without there being any blood present to account for the phenomenon, in the bodies of subjects who, during their lives, had exhibited symptoms of *ataxic* or *nervous variola*. To conclude this subject, M. Costallat has observed gangrene of the lungs along with severe small-pox, and M. Fred. Cuvier, jun., has found small abscesses in the pulmonary tissue of those who had died during the suppurative stage of the disease, very similar to the purulent deposits encountered in these organs after unfortunate surgical operations on the limbs.

In all the varieties of small-pox which end fatally, the lungs are frequently found *gorged with blood*.

421. *Causes*.—Small-pox is a highly contagious disease; it is transmitted by mediate as well as by immediate contact; the contagion extends to some distance in the atmosphere and follows the direction of the wind. The contagious character is developed during the supuration of the pustules, and remains till the period of their desiccation. It does not appear to undergo any change from the individuals it affects or the varieties it presents; the pus and miasm of a confluent variola may communicate one which shall be distinct, and *vice versa*.

Small-pox spares no sex nor age, not even excepting the fœtus, which may be attacked through the medium of the mother, though she should not feel the effects of the poison, either from having been previously vaccinated, or had the small-pox naturally or by inoculation.<sup>4</sup> Such was the case of the mother of Mauriceau, according to Désormeaux:<sup>5</sup> she had been tending the eldest of her children, who died of

small-pox, and the day after this event she was delivered of Mauriceau, who, according to the testimony of his parents, came into the world with five or six distinct pustules of small-pox upon his body.

I am indebted to the kindness of M. Costallat for an opportunity of seeing a somewhat similar case: Rosalie L \* \* \*, aged twenty-four, presented a cicatrice on each arm nearly the size of a crown-piece, which appeared to have been produced by the fusion of several vaccine pustules into one. When about four months gone in her pregnancy she contracted small-pox along with three other individuals of her family, on the 6th of April, 1833. The eruption was characterized by large, distinct, flat pustules; Rosalie was so little incommoded that she went about her usual avocations, and it was only upon particular recommendation that she consented to keep her room for two or three days. After the 20th of April she mounted to a sixth flat, many times a day, to wait upon her father and husband. On the 28th she no longer felt the motions of her child, and on the 13th of May she miscarried. The whole surface of the fœtus was covered with variolous pustules perfectly well characterized.

Some privileged persons resist repeated inoculation, and even escape amidst variolous epidemics; but these individuals very commonly end by contracting small-pox at a later period of life.

The disease appears at all seasons and in every climate; it does not generally attack the same individual oftener than once; but we have well-authenticated instances to the contrary;<sup>6</sup> and some individuals even show a kind of predisposition to catch the disease a second and a third time.<sup>7</sup> (a)

Small-pox is occasionally *sporadic*; it, however, most usually occurs *epidemically*. It commonly commences its ravages in the spring, prevails during the summer, and disappears in winter. I have mentioned many small-pox epidemics which have occurred; in almost all of these have the divers forms of variola and its modifications, the varicellæ, been observed. Some of these epidemics were remarkable for their mildness, others as much distinguished for their malignancy, whilst several of them have appeared benign at one epoch of their continuance, and malignant at another.

422. *Diagnosis*.—Before the appearance of the eruption, the diagnosis of small-pox always presents much uncertainty, even when every attention is given to the character of the prevailing constitution or epidemic: the precursory symptoms of variola are common to many diseases; they acquire peculiar importance only when it is known that the patient has been immediately exposed to the influence of the variolous contagion.

The spots and papular rash which precede the formation of the umbilicated pustules may be distinguished from the spots of measles, as they feel granular, like small hard bodies under the finger; they are also evidently deeper, as well as firmer, than those of measles.

The umbilicated pustules of small-pox can only be confounded with those of pustular varicella, which present the same *flattened* appearance; these, however, are much less uniformly depressed in the centre, suppurate during a shorter period, and are of a duller white colour; farther, this species of varicella is not accompanied with any secondary fever. As to the other varieties of varicella, the points of difference are so many and so striking, that no mistake seems possible.

The pustules of small-pox are very unlike those of any of the other pustular diseases, particularly ecthyma, and do not differ less from the artificial pustules which are produced by mechanical irritation of the skin, and which have been very improperly entitled false inoculated small-pox. These eruptions, moreover, do not run any thing like the regular course of those of the eruptive fevers.

423. *Prognosis*.—Distinct small-pox, unattended with nervous symptoms, passive hemorrhage, dysentery, &c., almost always ends favourably from the fourteenth to the twentieth day. The duration of confluent small-pox is incomparably longer when the disease does not terminate fatally in either of its two first stages.

In the epidemic of Marseilles of 1828, the distinct variola did not

(a) We met with examples of a second attack of small-pox in the epidemic in Philadelphia in 1823-4.

<sup>6</sup> Thomson's Hist. Sketch, &c., 8vo. Lond. 1822.

<sup>7</sup> Gregory, Lond. Med. Gaz., vol. viii.

<sup>1</sup> Hist. des Inflammations, t. ii. p. 460.

<sup>2</sup> Archives gén. de méd., t. ii. p. 460.

<sup>3</sup> Journ. Complém. Nov. 1825, t. xxxiii. p. 90.

<sup>4</sup> M. Marc cites three cases of the kind. Dict. des sc. med., t. xvi. p. 71.

<sup>5</sup> Dict. de med. en 21 vol., t. xv. p. 397.



last beyond the fifteenth day, whilst the confluent species went on to the thirty-first day, and even longer.

Even from the very commencement of the attack the course of the disease may be in some measure calculated, from the intensity of the initiatory symptoms: "*Quo febris variolosa mitior, eò eruptio parior, eò lenior status inflammationis, suppuratior.*"<sup>1</sup> As a general rule, however, it is advisable to be extremely cautious in the prognosis of small-pox.

The favourable or unfavourable chances of small-pox, in truth, cannot be calculated without a just appreciation of each particular circumstance after it has occurred.

If the eruption be successive in confluent small-pox, the danger is in general less imminent; if, on the contrary, the pustules appear at once on the face, neck, trunk and extremities, the disease proves one of the most formidable to which the human body is subject, and death is very frequently its consequence.

Cerebral symptoms (nervous variola) at the invasion and height of the disease are very alarming.

Ecchymoses and petechiæ frequently announce a fatal alteration of the blood, and approaching dissolution.

Variolous inflammation of the larynx and trachea, croup and pseudo-membranous bronchitis make the prognosis more and more unfavourable.

Obstinate ophthalmia, otitis, cæco-colitis, abscesses and other accidental affections, are the causes of additional symptoms which protract and increase the risks of the convalescence.

The precocious development of the eruption, the smallness of the pustules, a flatness in their form, irregularity in their periods, &c., have all been signalized as unfavourable symptoms. The danger has been held to be extreme, when the elevations were filled with transparent serum instead of pus; the occurrence of hemorrhage during the period of suppuration, has also been regarded as a very disastrous symptom. These notions are fortunately but too well founded, when such outward signs occur along with the deeper lesions of the mucous membranes or of the viscera, or along with nervous symptoms and altered conditions of the blood. Under other circumstances, however, it would be rash to draw such serious inferences from any irregularity in the progress of the disease. (a)

424. *Treatment.*—The variolous fever, and inflammatory actions of small-pox having necessarily to pass through certain stages before they can be resolved, we must be content with endeavouring to moderate the severity of the principal symptoms, and not attempt by any perturbing measures to prevent their evolution or cut short their progress.

Intervening diseases, not variolous in their nature, may be met by more active and more varied modes of treatment.

425. In benign small-pox the inflammation of the skin is always slight, and that of the mucous membranes of the air and alimentary passages is seldom of any severity; still, as there is no necessary and invariable ratio between these affections of the two orders of surfaces, it may chance that a small-pox, distinct externally, may be accompanied by internal lesions of such importance as to require the strictest watching.

If the fever be trifling, if the inflammation of the skin and that of the mucous surfaces which accompany it, be slight, we shall have little else to do than to see the patient placed in a large room, and in good air of a moderate temperature. If the appearance of the eruption be preceded by vomiting and pain of the epigastric region of considerable severity, it is advisable to apply leeches to this part, to cover the abdomen with emollient cataplasms, prescribing at the same time complete abstinence from food, acidulated drinks to quench

(a) The character of the prevailing epidemic, when small-pox appears in this way, the circumstance of the patient being in a hospital or crowded room, or in his own apartment, and the previous habits of those attacked are all to be considered in forming a prognosis. Within my own experience I found that the proportional mortality was greater among my patients in the hospital, than in dispensary practice. Drunkards among men and prostitutes among women rarely escape.

<sup>1</sup> Stoll. Aphor. de cognos. et curand. febr. Aphor. 538, 8vo. Vien., 1788.

the thirst, and mucilaginous glysters to empty the bowels. If the inflammatory symptoms do not yield, if they become associated with a variolous laryngo-tracheitis, and if their severity seems to prevent the free evolution of the pustules upon the skin, general blood-letting ought to be practised, unless the application of a larger number of leeches to the scrobiculus cordis and fore part of the throat be preferred. When the eruption is complete, and the progress of the internal inflammatory affections is arrested, we have only to watch the further progress of these diseases, the symptoms of which soon begin to decline, and finally disappear under the influence of low diet and diluents, and by the natural progress of the disease.

426. The treatment of the severer cases of variola is attended with more difficulties.

1. The whole surface of the body is occasionally covered with pustules; the subcutaneous cellular tissue is greatly swollen; the parotid and sub-maxillary glands are enlarged, and variolous inflammations are set up in the mouth and nasal fossæ, on the conjunctivæ, pharynx, larynx, trachea and bronchia, and occasionally even in the stomach and intestinal canal (*inflammatory variolæ*). In this case, especially if the patient be young, the inflammatory condition must be modified by the abstraction of blood generally and locally, by oily and emollient embrocations, such as soft cerate or cream applied either cool or cold, and by the use of the temperate bath; the latter means has often appeared to me extremely beneficial in these varieties of small-pox. When the disease has attained its suppurating stage, the pustules should be punctured with the point of a needle, and the matter they contain suffered to escape and afterwards absorbed by a sponge dipped in some emollient decoction.

2. This purely antiphlogistic plan also appears to me preferable to any other in those cases where the disease wears a formidable aspect, from the intensity of the variolous inflammation of the air-passages, evinced by the dyspnœa which then accompanies the development of the eruption, and the livid tint of the pustules themselves (*laryngeal variolæ*).

3. As to *nervous variolæ* I feel truly at a loss to lay down any rules for their treatment. Patients sink when they are bled, and almost always die when treated upon other systems, such as the exhibition of camphor, assafoetida, valerian, oxide of zinc, &c., medicines, the whole of which have been very generally recommended. In these untoward cases I have frequently had recourse to the application of ice to the head, combined with diluents, and the administration of calomel in laxative doses. But this method, like all the rest, is but too frequently unsuccessful.

4. When confluent small-pox is accompanied with petechiæ, ecchymoses, epistaxis, and other hemorrhages analogous to those which are observed in purpura hemorrhagica, and which are very commonly attributed to an alteration of the blood, the use of purgatives, and of the acidulated decoction of bark, seem preferable to the antiphlogistic plan alone. Under all circumstances this variety of small-pox is almost uniformly fatal.

427. Other general plans and particular means have been recommended; but the circumstances which especially or exclusively require their employment have not been determined in a very precise manner. Thus, with a view to diminish the violence of the eruption and the symptoms which attend it, some have proposed to expose patients to the cold air, to plunge them into a cold bath, and to sprinkle or sponge the surface with cold water. The last-named measure never makes the pustules disappear, as some pathologists have expressed their fears it would; but I have known it aggravate the symptoms of the laryngo-bronchitis, which, in a greater or less degree, always accompanies confluent variola. I have not, however, seen it tried sufficiently often to have made up my mind as to its advantages and inconveniences. Some physicians,—De Moneta, Ploucquet, and Hoffmann, have advised the use of cold applications to be restricted to the face.

428. Several practitioners have supposed that they could cut short the course of the pustules by the free use of venesection. M. Janson states that a number of leeches, having been applied to the throat of a little girl labouring under confluent small-pox, gave occasion to a violent hemorrhage by which the patient was brought into great jeopardy, but which had the effect at the same time of causing the greater



number of the variolous pustules to die off. This fact, however, and several others, analogous in their nature, by no means authorize indiscriminate attempts to cut short every case of confluent small-pox by copious and repeated bleedings; the method, first recommended by De la Metrie, pursued as a general rule, would certainly be hurtful; but such cases should embolden us to deplete freely at the commencement and during the eruption of coherent small-pox of a decidedly inflammatory character, accompanied by erysipelatous puffing of the face, congestion of the brain and laryngo-tracheitis.

Pediluvia have been recommended in the hope of diverting the eruption to the lower extremities especially; I have never seen this expectation realized. Dr. Delaroche, of the Maison Royale de Santé, directed the application of blisters to the legs with better success.

When the eruption of small-pox appears slowly or with difficulty, and especially when this delay appears due to the impression of cold, as occasionally happens in winter among the poorer classes, some practitioners advise recourse to be had to the warm and vapour bath; others recommend emetics, and others sudorifics, such as the acetate of ammonia: I have seen too few of these tardy eruptions to feel myself in a position to recommend in particular any one of the plans mentioned.

Mercurial preparations internally and externally have been much lauded, as preventing or lessening the violence of the variolous eruption; I have not myself tried them to a sufficient extent to enable me to venture an opinion upon their efficacy.

Purgative medicines have been recommended in confluent small-pox to diminish the violence of the eruption, and even to make it abort entirely; further experiments on the value of this idea require to be made. Purgatives are frequently of use at the period of suppuration, to lessen the pyalism and inflammatory affections of internal organs so apt to show themselves at this stage; they have also been particularly prescribed with a view to prevent verminous complaints, which are extremely rare at the present time.

Tonics—wine, the bark, the mineral acids, and camphor internally and externally, may all become useful at the period of suppuration and desiccation, especially to the aged, and to cachectic children, or when the disease assumes a *putrid* or *hemorrhagic* character (Sydenham, Fouquet).

Opiates, especially by way of injection, are useful when dysenteric symptoms complicate small-pox; and they have been recommended during the state of insomnia and delirium that accompanies the confluent disease (Sydenham, Stoerck). In these alarming cases, however, their advantages have often appeared to me questionable.

429. Symptoms of small-pox having once been declared, is there any mode of diminishing the virulence of its poison? Some physicians have maintained the affirmative of this proposition. Moublet<sup>1</sup> asserts that we may cut short the disease, or at least produce at our pleasure, *variola sine variolis*, by evacuating the virus with emetics and purgatives. De la Metrie believed that he could attain the same end by copious venesection, and this notion has been again brought forward in these latter times. Eichhorn is of opinion that the disease may be made to abort by the free use of the mineral acids, and of calomel and antimonial preparations exhibited from the invasion of the primary fever. He also sets forth another piece of practice, which, according to him, has great influence in rendering small-pox more benign. This consists in *making from forty to fifty incisions on the person of the patient*, as soon as the symptoms of the primary fever are discovered, or even when the eruption begins to appear on the face in the form of small hard papulæ, *into which as great a quantity of the vaccine virus as possible is to be introduced*; and he assures us that if the medical attendant have been called in time to do this, it will be his own fault if he ever lose a patient from small-pox. I have tried this practice on two occasions; but both of the patients died, the one of the confluent, the other the nervous form of the disease. The stigmata of the eruption, however, were conspicuous over the whole body at the time the vaccine inoculation was performed, and it was perhaps too late to give the operation a fair chance of succeeding; it was also done with vaccine matter preserved

between two plates of glass, and Eichhorn recommends the virus to be transferred directly from the vaccine pustule to the punctures.

I must add that the experiments of Woodville, Willan, and M. Herpin upon the reciprocal influence of the variolous and vaccine virus, appear to favour the idea of Eichhorn, and I should, for my own part, certainly put the plan in practice as often as the opportunity for doing so occurred.

430. The *local* treatment of variolous pustules has been the subject of numerous experiments.

During the suppurating stage in adults, and especially in children, it is proper to wash the eyes frequently, with some emollient decoction, and to cleanse and unplug the nostrils by instilling fluids of the same description from time to time. The heat which is complained of in the inside of the mouth may be lessened by washing or garbling repeatedly, and by making patients sip a little cool drink at frequent intervals. It is also proper to prevent children from scratching themselves, and should the skin appear in any place excoriated or ulcerated, it must then be dusted over with fine starch or the powder or lycopodium. Cotugno further recommends the pustules to be frequently bathed in order to accelerate their progress, and to render the pits less apparent afterwards. It was the practice formerly to follow the advice of the Arabian physicians, and open the pustules arrived at the period of suppuration, to squeeze out the pus they contained, and then gently to bathe and cleanse the surface with tepid milk and water, decoction of mallows or of poppy-heads. This system has always appeared to me to be beneficial: a patient who was under my care in the Hôpital St. Antoine, on account of a very severe confluent small-pox, evidently owed his recovery to the zeal and attention of Dr. Bonnet, of Poitiers, who expressed and wiped away the matter from the whole of his pustules.

Hufeland and Tournay recommended the pustules to be laid open, and Mr. Stewart, in 1829, proposed to plunge the point of a needle into the variolous elevations on the first or second day of their appearance, and by compression to force out the serum or blood which they contained. This measure does not seem so good as the system of cauterization to be mentioned immediately.

With a view to check or modify the eruption, some practitioners have advised the skin to be briskly rubbed with a coarse towel, a short time after the appearance of the pustules. This recommendation is now never acted on.

431. Messrs. Bretonneau and Serres have proposed *cauterization with the nitrate of silver* as a means of cutting short the progress of the pustules of small-pox. M. Bretonneau recommends the apices of the pustules, shortly after their appearance, to be transfixed and removed with a needle of gold or silver charged with nitrate of silver. M. Velpeau advises the summits to be first removed, and the exposed points to be then touched with a sharp pencil of nitrate of silver, or a fine probe charged with a solution of this substance, which is to be plunged into the centre of the pustule, the surface being subsequently farther cauterized by the application of the caustic in substance. Others again have held that it was better to cauterize the pustules *en masse*, with a camel's hair pencil dipped in a solution of nitrate of silver, containing about a scruple of the salt to an ounce of distilled water, and to repeat this application if the first did not seem effectual.

432. If, during the course of the first and second day of the eruption, the variolous papulæ be deeply cauterized *individually* after opening their apices with the point of a lancet, they are often completely arrested in their progress. About the seventh day the cuticle which has been exposed to the action of the caustic, falls off in plates, generally without leaving any apparent cicatrice. If the pustules are not treated with the caustic sooner than the third day, they frequently do not miscarry completely, and if the measure is not attempted earlier than on the fourth and fifth day, the operation then fails to check the progress of the inflammation, and the pustules are followed by cicatrices.

The plan of cauterizing *en masse* is less painful and much more expeditious than the preceding one, which requires long hours to touch the whole of the pustules even of the face, in a confluent case. The general application of the caustic, however, scarcely ever puts a complete stop to the progress of the pustules when it is done even so early as the first or second day of the eruption. It suspends, indeed,

<sup>1</sup> Journal de Méd. t. xvii. 1762.



to outward appearance, the march of the eruption, but when the crust produced by the caustic, comes to be detached, traces of variolous pustules which have continued to advance unmodified through their regular stages, are discovered beneath it.

To sum up, on this head, then, it appears: 1. That the general cauterization of the pustules can only be advantageously instituted on the first or second day of the eruption. 2. That the application of the caustic solution should be restricted to those places which we are interested in preserving free from cicatrices; for the pain that attends the operation, and the reaction which follows it, induce me to believe that the cauterization of a large extent of surface would be more likely to cause than to prevent affections of the brain. 3. Lastly, the sole incontestable advantage of the *individual* cauterization of the pustules, performed in time, being to preserve the skin from cicatrices, the *ectrotic* method appears to me applicable rather to those pustules evolved upon the face in distinct or semi-confluent small pox, than to the coherent pustules of the most serious varieties of the disease. (a)

(a) Among the means of abating the eruption and preventing the subsequent pits from small-pox, are the exclusion of light from the sick room, and covering the skin, as that of the face, with gold leaf, directly upon the invasion of the disease, and continuing the application, by renewal every morning and evening, until the end of maturation and the suppurative fever. The same good effects are represented to have been obtained by anointing the face of those who had small-pox with sweet oil. Another means of carrying out the ectrotic method, is by the application of sulphur ointment, slightly rubbed over the entire cutaneous surface, as recommended by Dr. Medivaine, of Ghent. The ointment is composed of two drachms of sulphur to one ounce of lard; and it is to be used three times a day, at as early a stage of the disease as possible.

A still more important ectrotic remedy is found in the external application of mercury by plaster or even ointment. M. Briquet (*Archives Générales de Médecine*, Octob., 1838), points out the details and advantages of this practice in the treatment of all the varieties of small-pox, whether simple, confluent or modified. "The effect of these plasters is, in general, either to prevent the development of the pustules, or so to modify them that they become mere abortions, and very slightly affect the skin. M. Briquet details several cases which support him in his opinion that mercury, locally applied, exercises great influence on the course and nature of the eruption. By the application of the plasters the exanthema either undergoes complete resolution, or it is converted into vesicles or tubercles. The resolution is either primitive or secondary. The former takes place when the plaster has been applied whilst the eruption is still papular, and its effect is the complete disappearance of a number of papulæ, which, without the application of the plaster, would have passed into pustules. This diminution of number, as ascertained by counting the number of papulæ before and after the application of the plaster, varies from a third to a tenth of the whole number. Secondary resolution ensues, when the papulæ, after being covered by the plaster, increase in size for two days, and then pass into resolution. But the most general effect of the plasters is to produce conversion of the eruption into a vesicular or tubercular form. The vesicular is the more common, and in such cases the eruption bears considerable resemblance to herpes, or to vesicles which have been developed under a cataplasm. The vesicles, when they have reached their maximum development, contain a milky fluid; their walls are formed by an epidermis extremely thin, and not at all tense, and their base is sometimes surrounded by a slight areola of a pale rose colour. They vary in size; the smallest are not larger than the point of a pin, the largest equal a millet-seed. The skin between the individual vesicles is pale and white, and never red and swollen as in pustular small-pox.

"The slightest friction destroys the epidermis of the vesicles, and their base then appears as a moist, slightly red surface, which, on the day after the removal of the plaster, has already become dry and covered by a delicate epidermis. No scales are ever formed on this surface. In no case has M. Briquet ever seen a prominent cicatrix formed, except in one which was treated by M. Nonat, and in which there were a number of very minute cicatrices, but still widely differ-

433. Certain *complications* and several *phenomena* which occur in the course of small-pox, require particular attention.

The inflammatory affections of the mucous membranes which accompany the eruption of small-pox—the ophthalmia, coryza, laryngo tracheitis, stomatitis, &c., all require the antiphlogistic plan of treatment. "*Ubi institueretur si variolæ non adessen*" is a rule which I used at one time to take as my guide, but which now appears to me to require modification. In fact, it is found that variolous inflammatory affections do not give way to blood-letting like the inflammations that are independent of the agency of miasmata, or the inoculation of a poisonous virus; in the latter description of cases the antiphlogistic treatment ought certainly to be much less energetic than in the former.

If inflammation of the encephalon be an extremely rare complication in confluent small-pox, it is still worthy of remark that the nocturnal exacerbations are almost always accompanied by delirium and agitation. After the abstraction of a moderate quantity of blood, and the application of a number of leeches behind the ears, or to the openings of the nostrils, I have several times succeeded in allaying

ent from the deep marks of common small-pox. In this case M. Briquet doubts whether the plaster had been rightly applied.

"In order that the plasters may have the effect of modifying the eruption, they must be applied before it has become pustular; when applied later than the fifth day, they do not appear to exert any beneficial influence.

"The conversion into tubercles is more rare, and generally takes place in cases of confluent small-pox. They harden and desquamate, soon after removal of the plaster, without leaving any permanent cicatrix.

"The plaster is best applied spread upon some coarse stuff, stiff enough to support itself, and thus remain in exact contact with the skin. A little mercurial ointment is applied to the eyelids and nostrils, as the plaster cannot readily be kept upon these parts. The plaster is allowed to remain for three days in simple small-pox, and a day longer in confluent cases. No benefit is derived from a longer application, but rather the reverse, as softening of the base of the vesicles may ensue in consequence, and cicatrices be formed.

"When the plasters are allowed to remain too long, a slight erysipelas may be the consequence, but this is extremely rare. In two cases an eruption resembling measles followed the application of the plasters, but it did not appear certain that it was in consequence of them. A slight eczema is sometimes produced by the plasters, but its extent is always very limited, and it is of little consequence. In no case was any deleterious effect produced by thus modifying the eruption, but the advantages appear to be many. The inflammation that would otherwise have ensued in confluent cases was obviated, and the brain thus in all probability prevented from being affected.

"The mercury seems to be the chief agent in effecting the modification. Pressure did not produce the same effects, for the pustules were developed as fully below the adhesive plaster as upon the free surface of the skin. Neither have the plasters of lead any effect in changing the nature of the eruption; but the modification is produced by mercurial ointment spread upon the surface, equally well, if not better than by the mercurial plaster."

M. Olliffe, President of the Parisian Medical Society, read a paper before that body, recommending the mercurial topical practice. It would seem from his experience, that, although it failed as an ectrotic, when used in the pustular stage of small-pox, it still greatly modifies and ameliorates the local inflammation.

The plaster employed by these gentlemen is the *emplastre de vigo*, or the *emplastrum vigo cum mercurio* of which the following is the formula.

- R. Mercury 95 parts:
- Balsam of Storax 48:
- Common plaster 312:
- Wax, resin, and turpentine, of each 16:
- Gum ammoniac, bdellium, olibanum and myrrh, each 5:
- Saffron 3:
- Spirit of lavender 2:
- M.



these cerebral symptoms by the prolonged and repeated application of ice, or of cloths wrung out of cold water, to the head, at the same time that the feet were enveloped in warm emollient cataplasms, or that blisters were applied to the legs.

434. During convalescence from small-pox, the occurrence of furuncles, of ecthyma, and of various other forms of cutaneous inflammation, besides attention to regimen, almost always require the use of the simple emollient warm bath; this is also the period when it is frequently useful to exhibit mild purgatives, unless the state of the intestinal canal contra-indicates the practice.

The diarrhoea and cæco-colitis of convalescence are successfully met by means of *milk diet*.

Abscesses ought to be opened at as early a period as possible, and sloughs and excoriations of the sacrum, when they occur, require to be dressed with the greatest care.

435. From time immemorial, it has been the practice in Georgia, Circassia, Egypt, and Hindostan, to inoculate small-pox, in order to make it less fatal in its effects. This operation, long unknown in Europe, was performed, for the first time, in 1673, by Timoni and Pilarino,<sup>1</sup> during the prevalence of an epidemic small-pox which desolated Constantinople. The fame of the method, introduced into England by Lady Mary Wortley Montague, spread rapidly, and was generally practised all over Europe, until Jenner showed that the inoculation of the cow-pox possessed immense advantages over that of the small-pox. (a) (Vide *Vaccinia*.)

#### Historical Notices and particular Cases of the Disease.

436. Aharoun or Aaron is the first writer who mentions small-pox (622 B. C.) under the name of *djidri*, which the Latin translators have rendered by the word *variola*. The description of Rhazes<sup>2</sup> is so accurate as to leave no doubt in regard to the nature of the disease he witnessed, although it is very singular that he should have made no mention of the *contagiousness* of the affection. As to the therapeutical views of the Arabian writer, M. Eusèbe de Salle<sup>3</sup> has shown that these formed the prominent feature in his work, and that Sydenham, whatever may have been said to the contrary, had, in fact, added little to their excellence.

(a) "In inoculated small-pox the proportionate mortality is very small; but although the individuals who were submitted to the process of inoculation were safe, with comparatively little risk from present disease, and protected with considerable certainty from future attacks of small-pox, yet the mortality from this disease among the people generally was greatly increased. A large class of unprotected persons, who either could not or would not avail themselves of the benefit of inoculation, continued to exist in every country; and they became greater sufferers by the multiplied foci of contagion, caused by the separate cases of inoculation. Dr. Lettsom, by documents delivered to the committee of the House of Commons, and founded on deductions from the bills of mortality, distinctly proved that in the fifty-five years preceding the introduction of inoculation, or between 1667 and 1772, the average number of deaths occasioned by small-pox was, to the number of persons that had died of all diseases, only as seventy-two to 1,000; while in the forty-two years succeeding the practice of inoculation, the proportion had increased to eighty-five in the 1,000; and subsequently, Sir Gilbert Blane had calculated, that in the last thirty years of the past century it had increased to ninety-five in 1,000; adding, that in the year 1800 the small-pox had broken out twenty times in the Channel fleet alone." Bell and Stokes' *Lectures*, 3d edit., p. 722, vol. ii.

<sup>1</sup> Timoni (Em.). *Historia variolarum quæ per incisionem excitantur*. Constantiæ, 1715.—Pilarino (J.). *Nova et tuta variolas excitandi per transplantationem methodus*, 12mo. Venetiis, 1715.

<sup>2</sup> Rhazes. *De variolis et morbillis*, interprete Joanne Channing, 4to. Oxon., 12mo. Goettingæ, 1781. (b)

<sup>3</sup> De Salle (Eusèbe). *De la variole chez les médecins Arabes* [Journ. complém., t. xxxii. p. 193].

(b) See also an English translation from the Latin version, prepared by Dr. Mead and published with the works of the latter.

Many inquirers have maintained that small-pox had been seen by the Greek physicians; Willan<sup>4</sup> has strengthened this opinion by much deep and very learned research, which, however, has not satisfied my mind of its accuracy.

It is generally believed that the first eruption of small-pox occurred in Arabia. According to an Arabic manuscript in the library of Leyden, it seems to have appeared there about the 572d year of the Hegira. Transported into Egypt in 640, at the period of the conquest of this country by the Caliph Omar,<sup>5</sup> it afterwards spread in all the directions in which the Saracens carried their arms. In this way it reached Spain, Sicily, Naples, and France, from whence it was communicated to the rest of Europe and to America. There is a passage, however, in the chronicle of Marius, Bishop of Avenches,<sup>6</sup> which might lead to the belief that small-pox had appeared in Europe long before the date usually assigned to its introduction.

437. Interesting observations on *congenital* small-pox;<sup>7</sup> on *second attacks* of the disease;<sup>8</sup> on *variola sine variolis*;<sup>9</sup> on the laws of the *etiology* of small-pox;<sup>10</sup> on epidemics of *benign*,<sup>11</sup> and of *malignant* small-pox;<sup>12</sup> and of small-pox possessed of *various characters*;<sup>13</sup> on the *complication* of this disease with *peripneumonia*;<sup>14</sup> with *œdematous angina*;<sup>15</sup> with *pseudomembranous angina*;<sup>16</sup> with *croup*;<sup>17</sup> with *pseudomembranous bronchitis*;<sup>18</sup> with the *granular eruption of the intestinal canal*;<sup>19</sup> with *purpura*;<sup>20</sup> &c. Various remarks have also been made on the *secondary fever*,<sup>21</sup> and on diseases *consecutive* to small-pox.<sup>22</sup>

For information on the structure of the pustules, the work of Cotugno<sup>23</sup> may be consulted (he has given a good account of the *small white filaments* which traverse small-pox pustules), and the lectures of M. Chevalier,<sup>24</sup> who has demonstrated the existence of a pseudo-membranous substance in the umbilicated pustules. M. Deslandes has erroneously ascribed the pits in the centres to the pores of the skin; another writer,<sup>25</sup> upon no better grounds, indicated the *sebaceous follicles* as the seat of the disease. Even the *crusts*<sup>26</sup> of small-pox have repeatedly been made the subject of chemical analysis. Remarks have been published on the treatment of small-pox, by *excluding the light*,<sup>27</sup> by *puncturing*,<sup>28</sup> and by *compressing*<sup>29</sup> the pustules, and on the *ectrotic*, or method of treatment by cauteriza-

<sup>4</sup> Willan. *Miscellaneous Works*.—An inquiry into the antiquity of the small-pox, etc., edited by Ashby Smith, 8vo. London, 1821.

<sup>5</sup> Paulet. *Histoire de la petite-vérole*, 12mo., 2 vol. Paris, 1768.

<sup>6</sup> "Hoc anno (570) morbus validus, cum profluvio ventris et variolis, Italiani, Gallique afflavit." (Hist. francor. scriptor. t. ii.—Marii Episcopi chronicon.)

<sup>7</sup> Jenner. *Méd. chir. transact.*, v. i. p. 269.—Deneux. *Cas de variole chez un nouveau-né, la mère ayant été vaccinée* (Journ. hebdom., t. viii. 2e série, p. 56).—Husson. *Revue médicale*, t. xi. p. 151.—Noblet. *Archiv. génér. de méd.*, t. xvii. p. 126.—Jermyn. *Diss. de variolis a graviditate foetus traditis*. Leidæ, 1792.

<sup>8</sup> Oppert. *Journ. complém.*, t. xxxvi. p. 189.—Bull. des sc. med. de Ferussac, t. xx. p. 182.—Th. Barnes. *Cases of five indiv. having the small-pox twice*. Edin. Med. and Surg. Journ., v. xix. p. 182.—Gregory, *med. gaz.*

<sup>9</sup> Pautier de Labreville. *an variolarum morbus absque eruptione?* Paris, 1747.—Du Bourry. *Diss. an variolarum morbus absque eruptione?* Paris, 1772.

<sup>10</sup> Herpin. *Gaz. médic.*, 1832, 4to. p. 563.)

<sup>11</sup> Von Hoven. *Geschichte eines epidemischen Fiebers*, etc., 8vo. Jena, 1795.

<sup>12</sup> Plinta (Jo. Max.). *Histor. epid. variolos. Erlangensis, anni 1790*.—Erlangæ, 1792.

<sup>13</sup> Otto. *Note sur les épid. de variole qui ont régné en Danemark et en Suède*. (Revue méd., t. viii. p. 115.)

<sup>14</sup> Robert. *Epidém. de Marseille* (Rev. méd., Jan. 1829, p. 90).—Couture. *Des varioles compliquées*, 4to. Paris, 1829.

<sup>15</sup> Nolé. *Journ. Hebdomad.*, 1832, t. ix. p. 434.

<sup>16</sup> Louis. *Gazette médic.*, 1831, p. 224.

<sup>17</sup> *Gazette médic.*, 1833, p. 141.

<sup>18</sup> *Lancette française*, t. vi. p. 21.

<sup>19</sup> Bouilland. *Journ. hebdomad.*, 1832, p. 327.

<sup>20</sup> *Journ. Hebdomad.*, 1832, p. 327.

<sup>21</sup> Hallé. *Sur la fièvre secondaire et l'enflure dans la petite-vérole*. (Mém. de la Soc. Royal de Méd., t. vii. p. 423.)

<sup>22</sup> Arch. génér. de médéc., t. xxvii. p. 542 (abcès nombreux).—Weller. *Traité théor. et pratiq. des mal. des yeux*, t. ii. p. 154.

<sup>23</sup> Cotugno. *De sedibus variolarum syntagma*, 12mo. Viennæ, 1771.

<sup>24</sup> Chevalier. *Lectures on the general structure of the human body*, p. 168, 8vo. London, 1823.

<sup>25</sup> Deslandes. *Mémoire sur les boutons de la variole, précédé de quelques considérations sur les pores cutanés*. (Revue médicale, t. vii. 1825, p. 329.)

<sup>26</sup> Oakley Heming (G.). *Lond. Med. Gaz.*, vol. v. p. 140.

<sup>27</sup> Lassaigne. *Analyse des croûtes varioliques* (Journ. de chimie médicale, t. viii. p. 734).—Lamorlière. *Journ. de chim. méd.*, t. iv. p. 488.

<sup>28</sup> Picton. *Archiv. génér. de médéc.*, t. xxx. p. 406.—Nouvelle rev. méd. 1832, t. iii. p. 293.

<sup>29</sup> Stewart. *Lond. Med. Gazette*, t. iii. p. 525: *Treatment of small-pox, by puncturing the pustules*.



tion.<sup>1</sup> Calamine<sup>2</sup> and chlorate of lime<sup>3</sup> have been recommended to prevent the occurrence of cicatrices; lastly, copious venesection has been recommended to cause the *miscarriage* of the pustules.<sup>4</sup> The subject of *inoculation* of small-pox has given occasion to many works.<sup>5</sup> This operation by means of *punctures* has been performed on animals in the hope of producing the small-pox pustules, but in vain.<sup>6</sup> Dr. Sunderland<sup>7</sup> having lately announced that he had succeeded in engendering vaccinia in kine, by clothing them with a coverlid taken from the bed of a small-pox patient, the experiment was repeated by Dr. Numan of Utrecht,<sup>8</sup> who informs us that no eruption occurred either on the teats or udder, but that a few variculous pustules were developed on the bodies of the animals. These experiments require to be repeated.

To conclude, Dr. Gregory has proposed to divide legitimate variola into five varieties.<sup>9</sup>

CASE LXIV.—*Confluent small-pox of the face; cerebral congestion treated by means of ice; gastro-intestinal irritation; boils.* Et. Tronchet entered La Pitié on the 24th of February, 1826. Eight days previously he had been attacked with sickness and vomiting, headache and fever, which for the last three days had kept him confined to his bed. Last night, after several attempts to vomit, and a noise of ringing in the ears, an eruption was remarked upon the skin. A considerable number of red raised spots, which under the finger feel like small rounded grains, are scattered over the face, and also, but more sparingly, over the trunk and limbs. These spots become pale on pressure, but still continue elevated above the surface; some of those of the face show a transparent point at the summit; the skin is hot and perspiring; the tongue white, moist and very red on the edges; the patient is thirsty, complains of epigastric pain, and the belly seems tumid; he has a dry cough, which increases the pain of the abdomen; the pulse is full and frequent (*fifteen leeches to the epigastrium; mucilaginous drink; low diet*). 26th.—No sleep through the night; singing in the ears; chills succeeded by copious perspirations; the leech bites continue to bleed; the spots of the face are larger and more numerous; the tops of the majority of them look white; the skin preserves its natural colour in the intervals between several of them, but it is red in those places where the eruption is clustered and confluent. The eruption is greatly increased since yesterday on the forearms, wrists, and eyelids. Tongue of a yellowish white; pain and heat of the pharynx; constipation; cough without alteration of voice; heaviness of head, and tardy answers to questions (*mucilaginous drinks*). 27th.—Sweating; delirium during the preceding night. The pustules are larger, less prominent, and full of a sero-purulent fluid; several show a small depressed point in the centre. The conjunctiva is injected and moist, the nose swelled and painful; the nostrils seem obstructed. The patient complains of shooting pains in the head, of inability to fix his eye steadily on any thing, and of weakness in the senses of sight and hearing (*thirty-two leeches to the fore part of the neck, mucilaginous drinks*). 28th.—The patient had

passed the night in a delirious state, and had sprung several times out of his bed. The face is red and swollen, and the pustules are almost all coherent. Other symptoms continue much the same; pulse frequent (*ice to the head*). The confusion of head went off while the ice remained applied; but as it subsequently returned, the ice was renewed and the patient passed a quiet night. March 1st.—The face more swelled than ever; several pustules discovered on the sides of the tongue, which is white and moist. General symptoms continue as before, but the pulse is no longer quick, and there is some headache (*demulcent drink with honey; ice to the head, emollient glyster*). The whole of the cerebral symptoms are much improved since the ice was applied, and the patient has not again been delirious. 2d.—The pustules of the face are nearly in the same state as yesterday; the features are swelled, but the colour of the skin is not so deep as it is usually in confluent small-pox. A series of small pustules beset the free edges of the eyelids. The tongue is dry in the centre, moist on the edges; the patient is thirsty; he swallows with greater ease, and has had a natural evacuation from the bowels; the pulse is quick; the voice clear and sonorous (*demulcent drink; lavement*). In the evening, some degree of deafness, singing in the ears, and headache; a fresh application of ice was followed by sleep. 3d.—The eyelids are closed and bathed in a serous and puriform fluid; several pustules have begun to dry up. The tongue is painful and swelled; thirst; abdomen tumid; expulsion of flatus by the mouth; colic; pain in the pharynx, voice natural; pulse frequent. The ice was not applied during the day; the headache returned, and was followed by a sort of stupefaction. 4th.—The desiccation of the pustules is very far advanced on the lips, chin, and alæ of the nose; on the limbs and chest the eruption is still suppurating, the pustules being large, slightly flattened, and opalescent in colour; a very few of them only are punctuated and depressed in the centre. Ecchymoses have taken place spontaneously over the clavicles. Continued perspiration, tongue dry and brown, considerable thirst (*demulcent drink; ten leeches to the front part of the neck; ice to the head*). The patient slept during the night. 5th.—Swelling of the face subsided; the whole of the skin is hot, and painful to the slightest touch. Tongue moist; deglutition still more easy; thirst; constipation; voice sonorous; pulse by no means quick; slight headache (*honey drink; ice to the head for half an hour*). The patient passed a quiet night. 6th.—Large brown incrustations on the chin, yellow or brownish scabs on the cheeks, separated by several pustules, the development and suppuration of which occurred at a late period. The pustules of the forehead and temples are not yet desiccated. The patient complains of intense pruritus and painful shootings in the face; on the breast the greater number of the pustules are still full of pus; on the limbs they are generally umbilicated, and have a silvery appearance; on the forearms the centres of a few of them begin to grow yellow; many clusters are shrunk and wrinkled. Tongue moist and white; considerable thirst; some sensations of hunger; natural evacuations from the bowels. Headache in the evening relieved by the application of ice for three-quarters of an hour; sleep during the night. 7th.—The pustules of the back part of the neck flattened and brown in their centres. On the wrists they look silvery. Proceeding from the circumference towards the centre, the greater number are surrounded successively with a pale rosy and linear areola, a white circle, a second slightly brown circle, lastly a circle of yellowish-white, the centre of which is depressed. The whole face seems covered with one large incrustation, forming a kind of party-coloured mask, of various shades of brown, yellow, and green. Several purulent bullæ are observed on the wrists and left forefinger. Tongue and digestive apparatus are in the same state as before. 8th. Several pieces of incrustation are detached over the right cheek, and the skin they covered appears ulcerated in different places. On the left cheek the incrustations seem ready to fall; on the forehead they are more adherent. The pustules of the chest shrink and dry up apace, as do those of the forearms also. The greater number of those situated on the knees and legs are still full of pus; all the others are flaccid (*mucilaginous lemonade; soup*). 10th of March.—The desquamation continue in the face; the skin, where freed from the incrustation, presents several chaps from which a few drops of blood have distilled. The pustules are drying on the fingers (*panada; broth*;

<sup>1</sup> Serres. Méthode ectrotique appliquée au traitement de la variole confluyente. (Arch. gén. de méd., 8vo. Paris, Juin 1825.)—Velpeau.—Note sur l'emploi des caustiques comme moyen d'arrêter l'éruption varioleuse (Arch. gén. de méd., t. viii. p. 437).—Meyraux. Méthode ectrotique de la variole (Annales de la méd. physiog. t. viii. p. 267).—Discussions académiques sur la méthode ectrotique (Revue médic., t. viii. pp. 166–174.—Ibid. t. ix. pp. 153–157).—Serres. Considérat. nouvelles sur la variole. (Gaz. médic. 1832, pp. 58–77.)

<sup>2</sup> George. Lancette franç., t. v. p. 252.

<sup>3</sup> Gubian. Lancette franç., t. v. p. 7.—Lond. med. Gazette, v. viii. p. 240.

<sup>4</sup> De la Mettrie Œuvres de médecine. Berlin, 4to., 1775.—Janson. Arch. génér. de méd., t. vi. p. 75.

<sup>5</sup> Dezoteux et Valentin. Traité théorique et pratique de l'inoculation, 8vo. Paris, 1799.—Woodville. The history of the inoculation of the small-pox in Great Britain. London, 1796. Dimsdale. Present method of inoculating for the small-pox, 8vo. Lond.

<sup>6</sup> Fiard. Gaz. médic. Paris, 4to., 1833, p. 693.

<sup>7</sup> Sunderland. Bull. des sc. médic. de Férussac, t. xxv. p. 158.

<sup>8</sup> Numan. Inoculation de la variole et de la vaccine aux brebis. (Bull. des sc. médic. de Férussac, t. xii. pp. 45–142.)

<sup>9</sup> London medic. gazette, vol. v. p. 221.—

1. Superficial variola in which the eruption only attacks the skin.

2. Cellular variola in which the variolous action extends to the subcutaneous cellular membrane, and is followed by abscesses.

3. Laryngeal variola in which the inflammation attacks the larynx and trachea.

4. Nervous variola.

5. The fifth variety is owing to an altered state of the blood, and is characterized by petechiæ and passive hemorrhage.



*mucilaginous lemonade*). 11th.—Desquamation continues. A boil has been evolved on the right side of the chest. Tongue clean; appetite; sleep; pulse weak and slow (*lemonade as before, the eighth hospital allowance, without any wine; lavement*). A second boil has appeared on the sacral region; the patient was up for four hours during the day. 13th.—Itching and tingling over the whole of the integuments; mouth clammy, belly somewhat tense. 14th.—Same state (*the half portion without wine*). 15th.—Mouth dry, thirst, pains in the bowels (*mucilaginous lemonade, beef-tea*). The irritable state of the alimentary canal which had formed one of the features in the case during the whole of its course, and was attended with the disengagement of large quantities of flatus, still continued for some time longer, requiring particular attention to diet and regimen; but the patient finally left the hospital perfectly well on the 20th of March.

CASE LXV.—*Congenital ichthyosis; confluent small-pox, the pustules of which seemed to be impeded in their development by the unusual thickness of the epidermis; laryngo-tracheitis*.—J. Porte, aged twenty-three, the subject of a congenital ichthyosis, entered La Pitié on the 10th of March, 1826. He had complained of headache, and great pain in the loins on getting up in the morning of the 11th; next day, he vomited two or three times. On Monday, the 13th, an eruption of small-pox appeared; a great number of red prominent elevations were scattered over the whole surface of the body. The skin of the face looked mealy, that of the thorax was uneven, rough to the touch, and traversed by slight furrows and prominent lines which crossed each other irregularly. On the sides of the chest and upper parts of the abdomen the cuticle was coming off in scaly layers. On the other parts of the belly it was of a mixed gray, and light greenish colour, disposed in perpendicular bands about three lines in breadth, separated from each other by slight furrows, the delicate cuticle of which formed a strong contrast with the thickness of that of the bands. On the back, arms, and shoulders, the cuticle was hard and thick, and was detached in scales. The forearms and thighs were affected with a slight furfureous desquamation. The patient informed us that his mother, his maternal uncle, and one of his brothers were affected in the same way. On the 15th, the furfureous skin of the face was covered with pustules so closely crowded together, that there was scarcely a point unoccupied; they were also confluent on the fore part of the neck, and were extremely numerous on the chest and limbs. The tongue is white, covered with nascent pustules; there is headache; answers to questions are delivered slowly; noises are complained of in the ears; the pulse is frequent and unequal; deglutition is difficult; pain is felt in the throat and pharynx; and fits of sneezing occur at intervals. 16th.—Sleeplessness, and raving during the night (the patient confined with the strait waistcoat); great dryness of the skin; pustules of a dull white colour, tongue yellowish, pain and very evident heat in the pharynx; swallowing performed with great difficulty; hard and distressing cough; pulse strong and frequent. 17th.—The delirium last night was again violent and attended with extreme restlessness.

The pustules on the face are confluent and umbilicated, *but they scarcely rise above the level of the skin*. On this region as well as upon several others, they seemed to be impeded in their evolution by the morbid and thickened state of the epidermis. The redness and swelling of the face are less remarkable than in small-pox developed in healthy integuments. On the abdomen and lower extremities, the eruption is less marked. The conjunctivæ are injected and the seat of an unpleasant sensation of smarting; the bowels have been locked up for a week, but the abdomen is nowise painful; cough very distressing. (*Diluents, sixty leeches to the lower part of the neck*.) 18th.—Rather better; the pustules of the face are stationary; the features are not swelled; cough guttural and frequent; nostrils dry and plugged with mucus; conjunctivæ injected; bowels opened; deglutition easier (*gum-water*). 19th.—The pustules of the face are generally shrunk and shriveled; those of the legs are small, white and but slightly raised above the surface; some of them are even shrunk and of a brownish colour; the restlessness and delirium were less in degree last night; slight headache; frequent cough; pain in the windpipe; voice altered and hissing; guttural rattle during expiration; tongue brown; deglutition followed by cough; pulse excessively quick. 20th.—Several brown scabs have formed on the forehead and at the root of

the nose. On its alæ and bridge, the cuticle is detached over a space of an inch in diameter, leaving the dermis exposed, the surface of which appears uniform and of a brownish-red colour. No farther traces of pustules are discoverable on the cheeks; on the other parts of the face they are coherent, flattened, and form large white and slightly prominent patches. On the trunk the pustules are flattened, white, very slightly raised above the surface; several of them are dry upon their summits. On the lower parts of the legs, large epidermic scales appear ready to fall off; the skin is of a pale red in the greater number of the intervals between the pustules, and white in the rest. The eyelids are flaccid, lips half open, tongue brown, covered with yellowish pustules upon the edges; abdomen soft, epigastrium painful; deglutition followed by cough; sonorous rattle at the inferior lateral part of the left lung, respiration noisy, cough troublesome, voice hoarse and weak, pulse small and contracted, death at noon.

*Examination of the body*.—The skin of the face is but little injected; that of the neck, legs, posterior parts of the thighs and buttocks is of a deeper red than usual; and the morbid coloration has not the livid tint observed in dead bodies generally. All the pustules which have not been injured are umbilicated, even in those situations where the ichthyosis is most remarkable; but they are generally smaller than the pustules at this period of small-pox. *Head, abdomen, thorax*.—The subserous cellular tissue of the arachnoid membrane covering the right lobe of the brain is injected; the same structure of the left side also exhibits several red patches; the base of the brain does not appear more vascular than usual; the white substance of the interior is slightly sandy (*sablée*) and there is a little serum in the ventricles; the other parts as well as the cerebrum are natural. The conjunctiva of the eye is not inflamed; but the membrane of the nasal fossæ is of a vivid red, and overlaid with thick yellow mucus. This membrane can be detached with the greatest facility from the bone beneath; the arch of the palate is covered with a great quantity of gray matter, the remains of the pustules with which it has been beset. The pendulous veil of the palate and its pillars are of a livid red. The tongue is covered with a thick, white matter; its papillæ are extremely prominent; its centre is livid and its muscles are injected. The whole of the pharynx is covered with a yellowish exudation; the natural colour of the œsophagus forms a strong contrast with the inflammatory tint of the pharynx. The stomach is distended by matters tinged with bile. The inferior curve presents a punctuated red appearance over an extent of about three inches every way. The termination of the small intestines, and the cæcum in particular, are not inflamed, and show no traces of pustules. A large quantity of bilious-looking stuff is contained in the different portions of the intestinal canal. The liver is large, and the spleen looks gorged with blood. The lining membrane of the larynx, trachea and bronchia is beset with small white spots crowded together in different degrees. These were not pustules, in the proper sense of the word, for small spots of a white colour, circular in shape, flattened on their surface and from one to two lines in diameter, were all that were detected. Some of them were no larger than a millet-seed, others in their form and dimensions resembled the clusters of confluent small-pox as they appear in children; others again were of the most irregular and dissimilar shapes, and evidently resulted from the agglomeration of several of the patches. The membrane over which these spots were dispersed, was in several regions of a livid red colour, and the various changes of which it formed the subject, gave it altogether a marbled or variegated appearance. The redness declined gradually from above downwards, and became less and less appreciable as the minuter subdivisions of the bronchi were attained. There was no trace of pustules beyond the bifurcation of the trachea, although the mucous membrane of the air-tubes generally was highly inflamed. The lungs were gorged in their posterior parts; the bronchial glands, situated near the first division of the bronchi, were black; the heart was sound, the right auricle alone presenting a livid tint, probably communicated by the great quantity of blood distending its cavity. The aorta and crural arteries contained little blood, but presented a great number of red stains of various shades of colour, which did not extend beyond their inner membrane.

The muscles were of a brownish-red hue; the sheaths of the exterior tendons of the left foot were full of yellowish pus; the articulations were healthy.



The red colour of the inner membrane of the arteries which I was formerly, 1826, inclined to attribute to inflammation, appears to me now to be owing rather to the *imbibition* of blood, which would seem to be favoured in some patients who die of small-pox by a peculiar state of this fluid. (a)

(a) I introduce here the three following cases which occurred in my hospital practice, and which are detailed in the passages already referred to in *N. Am. Med. Journ.* They will serve to show the appearance of the gastro-pulmonary mucous membranes in the several stages of the disease.

"I.—Ann Collins, white, aged 18 years, unprotected, became sick on Tuesday evening March 23, 1824, and was taken to the Almshouse, as one having the measles on Wednesday. On Thursday evening, some eruption was visible; on Saturday evening, March 27th, admitted.

"28th.—Visited. Face covered with a red, flat, dry eruption, particularly on the cheeks; small and vesicular on the chin and around the mouth. On the arms, it has the appearance of measles; on the hands, it is of a deep scarlet, with central vesicular elevations; on the legs is slight; tongue loaded and yellow, except at the borders, which are clean; pulse natural; complains much of pain in the back and sickness of stomach.

"30th.—Eruption covering the face, vesicular on a deep red ground with some tumefaction; rising vesicular on the limbs with scarlet bases. Tongue smooth and shining anteriorly, and with vesicles on it. Throat sore. Salivation. Pulse small and feeble. Has had menorrhagia since her admission into the hospital.

"31st.—The menorrhagia continues. Had last night epistaxis. Pulse small and slow. Tongue furred and red. Eruption confluent with indented and dark centres. Surface white and dry. Skin between red and inflamed. Very slight eruption on legs, and none on feet.

"April 1st.—Menorrhagia continues. Pulse small and labouring. Respiration laborious and hurried. Face swelled. Surface smooth, with white spots to represent the pustules. On breast and arms the eruption is in confluent patches which are nearly continuous—some pustules flat and indented, others smooth, with appearance of radii, and some more elevated forming blebs. Skin of the feet cold, and blue in spots; no elevated eruption on lower extremities. Tongue furred and yellowish. Throat sore. Eruption very copious on body, generally with blebs.

"*Vesperi*; pulse hardly perceptible. Anxiety and distress great. Dead at 10 P. M.

"*Examination* April 2d, in the afternoon.—On opening the thorax, the lungs and heart were found of the natural appearance and size. The larynx and trachea being divided, exhibited all the way down to the lungs an injected surface with whitish irregular spots, having nearly the same appearance as the flat smooth eruption on the face: in parts it was more evidently pointed, and showed by the aid of the microscope, a pustular appearance. In the lungs, the inner surface was still darker. The root of the tongue was covered with large and rather hard papillæ, with open summits. The œsophagus was smooth and white. The stomach near the cardia injected, and of a brownish-red in spots: the remaining portion white, presenting no diseased appearance. The spleen was very large and covered with copious miliary points. The omentum, to appearance gangrened, was dark, and altered in texture. The peritoneum, especially in the pelvis, was injected and inflamed, being of a semi-opaque dark colour. The uterus, small and firm, contained some bloody mucus in its cavity.

"II.—Joseph Foster, white, aged 22 years, unprotected, became sick on Monday evening 8th of March. The eruption began to show itself on Wednesday morning, 10th.

"12th.—Admitted and visited. Face covered with a red, dry, tubercular eruption, with some few yellow pustules. Same on arms, but no pustular appearance; partly tuberculous, partly vesicular. More sparse and scattered on breast and legs: none on feet. Slight cough. Tongue white, clammy, and loaded in middle—red at borders. Pulse rather frequent.

"14th.—Face covered with a pustulo-vesicular eruption with

whitish summits, red and inflamed bases. Skin between of same colour. Eruption dry and hard; very red, copious on limbs; less so on trunk. Tongue moist and less loaded. Pulse regular.

"15th.—No fever. Face of a deep red colour; eruption rising from it rather flat, irregular in figure and white at summits. Eyes inflamed. On limbs the eruption is red at base, vesicular in body and summit: on trunk in clusters. Tongue yellowish and rather furred. No complaint made; rests easy; sleeps well.

"16th.—No fever; tongue moist and a little loaded. Pustules nearly white. Some yellow, and beginning to dry on summits. Skin between still of a deep red. Eruption filling on limbs and trunk.

"17th.—Pulse strong and frequent; skin hot; tongue moist and loaded. Pustules scabbing on face. Not yet entirely filled on limbs, where they are in clusters with inflamed bases.

"18th.—Pustules full and matured on limbs. Running into each other in places. Tongue dry, brown, and furred in centre, yellow and loaded at sides. Pulse quick and frequent. Lies easy.

"19th.—Blebs formed on arms; pustules running into each other, beginning to shrink; matter oozing out. Tongue covered with a dark crust. Pulse quick and frequent. Erysipelas of eyelids and ophthalmia. Throat sore.

"20th.—Blebs larger and more numerous on hands and arms; purulent matter oozing out from some of the pustules. Face nearly scabbed over. Some small white pustules formed on the eyelids. Pulse frequent and vibrating. Tongue as yesterday. Gums tender.

"21st.—Pulse weaker. Desquamation going on; pustules shrunk and drying on limbs. Tongue as yesterday.

"22d.—Matter much absorbed on limbs, leaving a shrunk cuticle. Face covered with a brown and yellow scab and scurf. Tongue black and furred; clear at apex.

"23d.—Some erysipelatous inflammation of the skin; pustules all nearly disappeared from arms, trunk and thighs; some few, white and soft remain scattered over breast. Pulse frequent. Tongue black and incrustated.

"24th.—Was brought into town from Bush Hill.

"30th.—Desquamation nearly complete. Low frequent pulse. Respiration slow and laboured. Tongue incrustated.

"April 2d.—Dead at 10 A. M.

"Calomel had been freely given to this man in the earlier stage of his disease: and during the last week, spts. terebinth. and nutritive farinaceous food.

"*Examination*.—The pericardium, of a greenish colour, and its capillaries finely injected, was full of yellow serum. The lining membrane of the larynx and trachea was of a greenish-yellow colour throughout, and in the spaces between the cartilages, ulcerated and disorganized in several spots. Beneath the membrane was a venous injection. About the bifurcation it was injected; and in the ramifications of the trachea were seen several inflamed, and in places abraded and disorganized spots. A chocolate-coloured liquor with a sediment filled the bronchiæ and the larger tracheal subdivisions.

"The œsophagus was sound. The stomach showed clusters of bright red and brownish-red spots, in stellated and other irregular figures extending along the smaller curvature. The duodenum, at its commencement and in its course, presented similar clusters. The rest of the intestine was healthy. The brain was to appearance in a natural state.

"III.—Peter Johnson, black man, aged 38 years, unprotected, was taken sick on Monday, 29th March, in Sandy Hook. Eruption of small-pox appeared. April 3d, Saturday morning. Admitted same day.

"4th.—Eruption copious on face; papular and of irregular figure. Eyes suffused and red. On arms, same appearance as on face, but less tuberculous. On breast and body, eruption small and pointed; beginning to show on legs. Throat sore. Tongue yellow and loaded at sides; red in centre. Pulse full, equal, and rather frequent. Cough.

"5th.—Much anxiety and moaning. Eruption rough and tuberculous on face. On arms, it is in parts papillary and pointed, and in parts flat with indented centres. Pulse slow and equal.

"6th.—Eruption hard and tuberculous on face and arms; small and pointed on breast. Pulse slow; throat less sore; mind wandering. Is sitting up in bed, dressed. Tongue moist and yellow.



"7th.—Delirious through the preceding night; is now dozing. Eruption same as yesterday. Not so thick on legs, but hard and tuberculous.

"8th.—Tongue black and incrustated. Throat very sore. Eruption hard and flat. Pulse active.

"9th.—In a comatose state. Pulse slow. Skin cool.

"10th.—In the same condition. Drawn down in the bed, the thighs flexed on the abdomen, and lies on his side.

"11th.—Dead at six A. M.

"*Examination.*—The upper surface of the tongue of a brownish-yellow, full of holes and rough. At the posterior part, in place of the larger papillæ, were ulcers and cavities. The posterior nares and pharynx were covered with holes, formed by ulceration, and of a brownish hue, adjoining injected and apparent pustular parts. Tonsils ulcerated, and their investing membrane mostly destroyed. The œsophagus immediately below the glottis, smooth and sound. Yellowish matter flowing from the glottis. On opening the larynx, it was found half filled with a viscid light olive-coloured fluid; on removing which, the whole lining membrane, down to the bifurcation of the trachea, was found covered with clusters of ulcerated pustules of a yellow colour, with the intervening spaces of a brownish-red, highly injected, and destitute of its natural smooth, shining appearance. The internal surface of the glottis and epiglottis was in a similar but less marked state as the larynx and trachea. The pustular surface extends to the minute ramifications of the bronchiæ, and their cells beyond were highly injected.

"On opening the abdomen, the omentum was found dark and shrunk. Stomach contracted. Intestines distended, shining, and very vascular, with capillary injection when viewed externally. The peritoneal covering of the stomach showed a similarly injected appearance.

"The stomach being opened, displayed at its upper curvature, spaces studded with spots of a deep red or purple; apparently effusions surrounded by a vascular net-work. Same appearance towards the pyloric orifice, and in places on the duodenum, which together with the jejunum, particularly the latter, is of a dark leaden colour, and injected.

"The diaphragm on its upper surface, highly injected, as was also the pleura lining the thorax. The pericardium healthy.

"The brain was not, unfortunately, examined."

The following observations and tables by Dr. Gregory, (*Lectures on the Eruptive Fevers*), as noticed in the *Medico-Chirurgical Review*, January, 1844, will form an appropriate conclusion of the subject:

"Upon an average of years, 350,000 persons die annually throughout England and Wales; and 46,000 in the metropolis. The mortality by the four great epidemic maladies (small-pox, measles, scarlatina, and whooping-cough), is very nearly 40,000 in England and Wales, and about 5000 in the metropolis, averaging one in nine of the total mortality, or eleven per cent. This is a very large proportion. That four diseases only should absorb one-ninth of the total mortality of this, and probably of all other countries, may well excite our surprise.

"Table, exhibiting the Amount of Epidemic Mortality in England and Wales, during the years 1838, 1839, 1840.

	Year 1838.	Year 1839.	Year 1840.
Small-pox - - - - -	16,268	9,131	10,434
Measles - - - - -	6,514	10,937	9,326
Scarlet Fever - - - - -	5,802	10,325	19,816
Total Mortality by the Exanthemata -	28,584	30,393	39,576
Whooping-cough - - - - -	9,107	8,165	6,132
Total of Epidemic Mortality - - -	37,691	38,558	45,708
Total Mortality throughout England and Wales - - - - -	342,529	338,979	359,561

"This table shows that every year is distinguished by some master epidemic. In 1838, small-pox was the ruling epidemic throughout England. In 1839, measles and scarlatina struggled for the mastery.

## VARICELLÆ (VARIOLÆ SPURIE).

Vocab. *Varicella*.

438. I designate under the collective title *varicellæ* or *modified small-pox*, several contagious inflammations, pustular, vesicular or papular in their nature, unaccompanied with secondary fever, arising from, and having the power of transmitting the variolous contagion, and running their course within the space of one or two weeks.

The word *varicella* has long been familiarly employed in the language of medicine to signify a modified or spurious kind of small-pox; this consideration has determined me to make use of the term here, in the same general and comprehensive acceptation.

The number of varieties composing this group is not yet precisely ascertained. I have restricted myself to a description of the following: 1st. *Pustular varicella* (the *varioloïd* of some recent writers), distinguished according to the form of its pustules into the *umbilicated*, the *globose* and the *conoidal*. 2d. *Papular varicella*. 3d. *Vesicular varicella* or chicken-pox, and 4th. *Varicellar fever*.

439. A smaller number of species than those now enumerated were recognized in earlier times. Rhazes<sup>1</sup> speaks of a *false variola* which does not give immunity from small-pox at a subsequent period. Guido or Vidius<sup>2</sup> describes this false variola under the title of *crystalli*. Sennertus<sup>3</sup> admits three varieties of spurious variola; Sydenham,<sup>4</sup> whilst giving an account of a variolous epidemic, mentions a false variola which does not protect from a second attack; Morton<sup>5</sup> borrowed from the vulgar the denomination of *chicken-pox* to designate a disease of the same description. In a word, all the writers anterior to the period when inoculation was generally practised, speak of the occurrence of spurious variola which does not secure the individual affected against a future attack of the legitimate small-pox; and whilst some of them regard it as a very slight and benign variola, others treat of it as a distinct and specific disease. From the year 1772, the period at which small-pox inoculation was first practised in England, till the introduction of vaccine inoculation, the same opinions were constantly entertained. Hoffmann,<sup>6</sup> again, associated the whole of these eruptions under the single head of *variola spuria*. Van Swieten<sup>7</sup> recognized three species (steen-pocken, water-pocken, wind-pocken); Heberden<sup>8</sup> and Cullen<sup>9</sup> held chicken-pox to be the product of a pecu-

In 1840, scarlet fever was so general and so fatal that the mortality by it exceeded by one-fifth the ravages of small-pox during an epidemic season (1838), and more than doubled the mortality by that disease in 1839.

"The following table, exhibiting the amount of epidemic mortality in the metropolis during a period of five years, shows that the same general principle applies to town and country, but is less manifest in the smaller population:—

"Table, showing the Amount of Epidemic Mortality in London, during Five Years—1838 to 1842.

	Year 1838.	Year 1839.	Year 1840.	Year 1841.	Year 1842.
Small-pox - - - - -	3,817	634	1,235	1,053	360
Measles - - - - -	588	2,036	1,132	973	1,292
Scarlet Fever - - - - -	1,524	2,499	1,954	663	1,224
Total Mortality by the Exanthemata - - -	5,929	5,169	4,321	2,689	2,876
Whooping-cough - - - - -	2,083	1,161	1,069	2,278	1,603
Total of Epidemic Mortality	8,012	6,330	5,390	4,967	4,479
Total Mortality throughout London - - - - -	52,698	45,441	46,281	45,284	45,272"

<sup>1</sup> Rhazes. De variolis et morbillis, cap. v.

<sup>2</sup> Vidius Vidius. Ars univ. medicinæ, tom. ii. cap. vi. De variol. et morbill.

<sup>3</sup> Sennert. Oper. omn. in-fol. Lugduni, 1676.

<sup>4</sup> Sydenham. Opera, p. 132.

<sup>5</sup> Morton. Opera, t. iii. p. 58.

<sup>6</sup> Hoffmann. Medicina rationalis systematica, in-4., t. iii. p. 33.

<sup>7</sup> Van Swieten. Comment. in Boerhaave. Aphorismos, t. v. p. 10.

<sup>8</sup> Transact. of the Rl. Colleg. of Physic. of London, v. i. p. 427.

<sup>9</sup> Cullen. Synopsis nosol. method., t. ii. p. 134.



liar specific cause, whilst Sauvages<sup>1</sup> and Burserius<sup>2</sup> describe the disease as a variety of small-pox. Lastly, since the practice of vaccination became general, a remarkable modification of small-pox has often been observed, which Dr. Cross,<sup>3</sup> of Norwich, has regarded as a species of varicella, (*varicella cellulosa*), and I have treated of here under the title of *umbilicated pustular varicella*, but which has been separated from this class of complaints by Dr. Eichhorn<sup>4</sup> and others under the name of *varioid*.

However different these opinions may appear, it is still an assured fact, that ever since the small-pox was observed as a peculiar disease, a certain number of *spurious* cases, as they have been entitled, have occurred, which did not confer security against an ulterior attack of the more formidable malady. It is also established that many of these eruptions are characterized, like legitimate small-pox, by pustules or pseudo-membranous vesicles, whilst others show themselves under the form of transparent vesicles or of papulæ. Now if they be all of the same essential nature, and produced by the same contagious influence, as I conceive it is satisfactorily demonstrated that they are, the different elementary forms of these varieties will be found adequate to distinguish them from each other, without there being any necessity felt to resort to a new denomination for this purpose. Several modern pathologists, however, have especially designated the *pustular varicella*,—that variety of the disease in which the pustules are umbilicated like those of small-pox, under the name of *varioid*. But other observers, with Dr. John Thomson at their head, who first made use of the title, have employed the term *varioid diseases* as designating all the forms of eruption to which the contagion of small-pox could give rise, chicken-pox included among the number. Lastly, others, among whom we have to reckon Dr. Eichhorn, have detached legitimate small-pox and chicken-pox from this group, and have restricted the application of the name *varioid* to those variolous eruptions which presented umbilicated pustules in larger or smaller numbers, but were in every case unaccompanied by secondary fever.

With so many different meanings attached to the word *varioid*, therefore, and with a feeling of disinclination arbitrarily to detach the *pustular varicella* from those that show themselves with other and different features, I find myself obliged to reject the term entirely, which, indeed, is nowise necessary to me, inasmuch as I believe that even the purely *vesicular* form of varicella is produced by the contagion of small-pox.

The treatment of the varicellæ is in general the same as that of the distinct and benign form of small-pox. § 425.

#### *Pustular Varicella* (the *Varioid* of modern authors).

440. The red raised spots by which *pustular varicella* makes its appearance, are often pretty large and firm under the finger. They are surrounded by an irregular pale red areola, which is not uniform in its depth of colour, but is, as it were, sprinkled over with redder points or patches, usually of small dimensions, but occasionally very extensive, particularly in those situations where the eruption is to be confluent, or in their immediate vicinity.

On the second day of the eruption the summits of the spots are detached from the corion, the interspace being occupied by a minute globule of transparent fluid. These vesicles increase slowly in size, becoming gradually more and more opalescent, and at last appearing quite white. The pustules are now firm under the finger and scarcely discharge any thing if punctured. The opacity and white colour of some of the pustules appear to depend almost entirely on the presence of a sero-purulent matter which they contain; they thus form a kind of link of transition from the vesicular to the pustular form of cutaneous inflammation. More generally, however, the opacity in question is owing to another cause, namely, the presence of a disc of pseudo-membranous exudation in their interior (*umbilicated pustular varicella*) closely applied and adherent to the inner surface of the epidermis; although it must not be forgotten that a thick, yellowish and semi-transparent matter like jelly can be squeezed out of the interiors of

the very large or confluent pustules, especially when they are somewhat far advanced. The same circumstance is also very well seen in some globular pustules (*globose pustular varicella*), which, after the very first days of their existence, become opalescent, and at length opaque and white. A transparent vesicular circle is perceived to be formed around the pseudo-membranous disc, evidently by the detachment and serous elevation of the neighbouring cuticle. At a later period this circle disappears, the fluid it contains becoming milky. The false membrane is occasionally very thick; but in general it is less so than in small-pox; it always adheres to the cuticle, with which it might be confounded without due attention. It has a cellular aspect, but does not present the cupped appearance observed in small-pox except in the umbilicated pustules, which approach those of true small-pox more than the generality. The false membrane of the interior of the pustules also adheres to the surface of the corion; if they be laid open, a soft and whitish matter is found covering the surface of the papillæ. The epidermic conduits of the hairs which happen to pass through the pustules, look larger and whiter than usual. It appears consequently that the form and colour of the pustules of varicella depend on the extent and thickness of the false membrane deposited, and on the quantity of serum effused within them.

441. The red elevated spots of the corion continue, and even occasionally increase after the formation of the pustules. In those of a large size, and especially in such as are confluent, (in which, after having removed the cuticle, a better view can be obtained of the surface of the corion, of the false membrane and of the gelatinous-like matter contained in the pustules,) we observe in the point corresponding to the centre of each primary pustule, a small *eminence* or nipple-like projection, white on the top, red in the circumference, and surrounded by an intense degree of redness and some slight sanguineous effusion. At a subsequent period this little swelling of the corion subsides, but it is at times still visible, after the fall of the incrustations that are subsequently produced under the form of a lenticular eminence of a pink colour, surrounded by a white border which is due to the torn edge of the epidermis.

442. The *areola*, or red ring, which surrounds varicellar spots, broad at first, faint and irregular afterwards, becomes at length more circumscribed and of a deeper hue; when these spots are clustered together, or arranged in bands, they occasionally bear some resemblance to herpes. The intense red colour of the areola continues till the beginning of the period of desiccation, when it decreases considerably, and assumes a brownish hue which disappears in the course of time.

It is rare that true suppuration is set up in the pustules of varicella; they consequently almost never leave cicatrices.

#### 1. UMBILICATED PUSTULAR VARICELLA.

Vocab. *Varioid*, *Modified Small-pox*, *Cellular Varicella*.

443. This variety, which in fact differs from distinct small-pox in nothing but in the non-occurrence of the *secondary fever*, has been studied with particular attention in these latter days. It is most frequently observed under rather remarkable circumstances: 1st, in individuals who have had small-pox naturally or by inoculation, or who have been vaccinated and have been accidentally again exposed to the contagion of variola; it occurs, also, in those who have been a second time inoculated with the variolous virus; lastly, in some rare cases, it appears in individuals who have never been vaccinated, and have never had small-pox; it would seem farther to have been occasionally communicated by inoculation.

444. *Symptoms*.—The eruption may be slight or confluent; it is occasionally preceded by roseolous blotches disseminated over the surface of the body. In other respects the precursory symptoms of the *umbilicated pustular varicella* are extremely similar to those of the distinct small-pox. Generally of extreme mildness, these are, however, occasionally very alarming, and are attended with pain of the epigastrium, vomiting, delirium, &c. Their progress and intensity are by no means in relation to the extent of the cutaneous

<sup>1</sup> Sauvages. Nosol. method., t. li. p. 369.

<sup>2</sup> Burserius. Institut. medicin. practicæ, t. ii. p. 288.

<sup>3</sup> Cross. A history of the variol. epidemic, 8vo. Lond. 1820, p. 207.

<sup>4</sup> Eichhorn. Op. cit., vide varioid.



inflammation which is to succeed them: to a very smart attack of fever, extreme restlessness, and much delirium, we often see a very slight eruption succeed, the appearance of which is followed by the complete cessation of every serious and alarming symptom.

On the third or fourth day, dating from the invasion, the eruption shows itself upon the trunk, face and extremities, under the form of small red spots similar to large flea bites, which soon become hard, elevated, and, as it were, papular, though all do not follow the same course. Some disappear without becoming pustular, and others become vesicular or pustular in the course of eight and forty hours. On the morrow after the appearance of the eruption, the red spots are more prominent and acuminate, and contain a serous fluid in their apices. On the third or fourth day of the eruption the larger number are found to have acquired the *flattened* form, which the pustules of legitimate variola only present at a considerably later period. Thus arrived at their *height*, the pustules of this variety of varicella, flattened and oval-shaped, generally present a depressed point in the centre, and are surrounded by a narrow pale red circle. They are mostly from one to two lines in diameter. When compressed they resist under the fingers like bees-wax, and when they are punctured in one or two places with the point of a lancet, the plastic and nearly solid matter they contain does not escape. Their colour, at first of a pale pink, becomes of a dull white on the fifth and sixth day. On the seventh day of the eruption the greater number of the pustules have not yet changed their shapes; others, and especially such as are the most remarkable, are by this time occupied in the centre by a small brown or yellowish point of incrustation, which makes them appear still more umbilicated. Whatever may have been the degree of intensity of the eruption, no *secondary*, or as it is entitled, *suppurative fever*, which, in legitimate small-pox, is set up at this stage, ever appears. On the eighth day of the eruption, (thirteenth or fourteenth of the disease,) the pustules have shrunk, and are replaced by scabs of a yellowish-brown colour, laminated in their texture, sub-epidermic and lenticular; on the face, indeed, the greater number of the crusts are often detached before this time.

After the removal of the crusts, a few circular and depressed cicatrices, and a great many small or red livid spots are discovered upon the skin; these may continue very conspicuous, even two months after the invasion of the disease.

Inflammatory affections of the larynx and trachea, so frequent in confluent small-pox, are seldom observed in the umbilicated pustular varicella; but the skin, and especially that of the face, may be very much injected, erysipelatous in appearance, and the seat of severe tensive pain. Pustules are now and then observed thrown out on the mucous membrane of the mouth and on that of the genital organs.

The flattened and frequently umbilicated pustules of this form of the disease, are almost always mingled with conoidal and globular pustules. They also occasionally assume very various shapes when several of them happen to be congregated in the same spot and fused together.

445. The course of the eruption is occasionally *irregular*, so that papular elevations, pustules, and incrustations are found at the same time in the same individual. This circumstance is remarkable when the pustules appear in successive crops; very frequently, however, the course of the umbilicated pustular varicella, during the first week, is as regular as that of small-pox itself.

When the eruption of this species of varicella is confluent, the face may become entirely covered with thin yellowish and lamellar incrustations similar to those of small-pox; but in the variety of varicella we are now discussing we observe no secondary fever, and this character distinguishes it certainly from legitimate small-pox.

The umbilicated pustular varicella runs its course in from twelve to fourteen days; it almost always ends happily; patients on their recovery carry about with them, for a long time, traces of their disease, and are sometimes marked with true cicatrices similar to those of small-pox. (a)

(a) The uniform absence of secondary fever in varioloid, as assumed by the author, is not entirely accurate. The fever occurs but seldom; still it does occur. On the subject of the appearance and general course of varioloid and of its sameness with the variola, Dr. Mitchell's

experience and my own were recorded in the paper before cited. As the narrative and argument are not long, the reader may not perhaps be displeased at their introduction here.

"That in an epidemic season, in which the tendency to cutaneous disease was very great, as in the years 1823 and 1824, the poison of small-pox should affect the then three privileged classes, viz., those who had had the disease naturally in early life, those who had had it by inoculation, and those who had been vaccinated, was not an anomaly.

"The operation of the variolous poison, when it took effect on the vaccinated, was often similar for the first few days to that on the unprotected, that is, on those who had never been subjected to inoculation or vaccination, or who had not been in any former period attacked with the small-pox. The fever, the gastric distress, and pains in the back and head, were occasionally as distinctly defined, as in the first period of the unmitigated disease. In some cases, the activity of the circulation, and the determination to the brain, seemed to be greater in the modified, than in the unprotected subject. The eruption on such occasions, was at first of maculæ, in abundant crops, of a crimson colour, with scarlet borders, especially copious about the back, shoulders and hips. But it is worthy of observation, that these maculæ, smooth and without elevation, would for the most part disappear, without leaving corresponding papulæ. Where the eruption was constant, and proceeded on to maturation, the pustules were usually fewer, the constitutional disturbance at the time less, and the subsequent process of desiccation, more rapid than in the genuine small-pox. Nor was there in general, secondary fever in the former, as in the latter. In these particulars, there were, however, some notable varieties; so that some who had been previously vaccinated, were attacked with such violence by the varioloid disease, or modified small-pox, as to have their lives endangered, and the face subsequently marked with the scars in the pustules. But, in general, the disease in this form was milder, more obedient to remedies, and very rarely of fatal termination.

"It will be observed that we speak of the disease occurring in the vaccinated, and possessing the characters already described as necessarily the product of variolous poison, or that same contagion, which, in the unprotected, produced the natural small-pox. The identity of cause of the two forms of eruptive fever, variolous and varioloid, has been, we know, denied by some; but, for ourselves, we see no ground to doubt the sameness, if we are to be swayed by the customary laws of evidence. We are led to this conclusion by the following reasons.

"1. Some of the vaccinated have at all times, since the introduction of the cow-pox, had, on exposure to the poison of the small-pox, an eruptive fever similar, in appearance and symptoms, to the latter disease, except on the score of its mildness.

"2. Some of the vaccinated have, on the introduction of small-pox matter by inoculation, had a pustule with an extensive areola, accompanied by fever, and a partial eruption on the other parts of the body.

"3. In the same family, persons previously vaccinated have had this modified eruptive fever, while living with, or nursing, those labouring under the natural small-pox; and *e converso* persons have had the natural disease without having been exposed to any other known cause than living with others who were then suffering under, or had just recovered from, the modified or varioloid disease.

"The fact that small-pox, by effluvia, or in the casual way, can take place within a limited time after the cow-pock, was first observed in Mr. Malin's case, see *Med. and Chir. Review*, No. 58; and I think Mr. Bevan's case (*Med. and Phys. Journal*, p. 455, vol. v.) is an instance of the same kind." 'Hence,' continues this writer, 'it appears there are two different sets of eruptive instances, to wit, 1. Those of the casual small-pox cotemporary with the vaccina. 2. Those of the casual small-pox supervening a few days after the constitutional affection in the vaccina.' Dr. Pearson was one of the earliest and most zealous advocates for the practice of vaccination, and his opinion, as just given, comes in most opportunely in the

<sup>1</sup> An examination of the report of the committee of the House of Commons, on the claims of remuneration for the vaccine-pock inoculation, containing a statement of the principal historical facts of the vaccina. By George Pearson, M. D., F. R. S.



446. *Structure of the pustules.*—The flattened pustules of the umbilicated pustular varicella are extremely analogous, in point of structure, to those of small-pox. As in these the duller white colour and depressed centre of the pustules are owing to the presence of a small pseudo-membranous disc deposited between the corion and epidermis, and adherent to the latter. Perhaps the sole anatomical difference between the two eruptions lies in the minor degree of development of this false membrane, and of the papular eminence upon which it is situated, in the modified small-pox. These eminences, which in legitimate small-pox almost invariably sink down and become ulcerated, are very seldom so affected in the pustular varicella, true suppuration occurring but very rarely indeed in the interior of the pustules of modified small-pox.

447. *Causes.*—Umbilicated pustular varicella prevails at the same times as small-pox and the other varieties of varicella, and is engendered under the same influences; it appears more especially in the beginning as also at the end of variolous epidemics, attacking particularly those subjects who have had small-pox or been vaccinated.

During the epidemic small-pox of Marseilles, in 1828, of 30,000 persons vaccinated, nearly 2000 were attacked with spurious, and some few with apparently true variola; of this number, twenty fell victims to the disease; of nearly 2000 individuals who had had natural small-pox, about twenty were affected with the prevailing epidemic, of which number four died. Of 8000 not vaccinated, nearly 4000 were attacked with small-pox and of these 1000 perished.

Pustular varicella has been said to have been observed especially among the vaccinated who have had few pustules, or among those in whom the vaccine pustules had been pale and without activity, or, further, among those in whom the pustules had been opened before their perfect evolution; these statements all require confirmation.

During the Marseilles epidemic it was thought that the pustular varicella could be traced as attacking in preference those individuals whose vaccination had been performed at the remotest periods, and I have been assured that this form of the disease was actually most severe in those who had been longest vaccinated, two statements the accuracy of which M. Gendrin has disputed, so that the question is still undetermined.

The contagious principle of small-pox, operating upon individuals little susceptible of its influence, and who have neither had small-pox nor cow-pox, may engender the umbilicated pustular varicella.

The same individual may be several times affected with this species of eruption by renewed exposure at different times to the variolous contagion.

Pustular varicella has been seen in individuals who have never had small-pox, and who have been vaccinated fruitlessly.

The inoculation of the fluid of the umbilicated varicellar pustule is not commonly followed by any symptom of general infection, and only produces a local eruption analogous to that of cow-pox. (Dugat.) The inoculation, however, may be succeeded by a general eruption with or without initiatory, certainly without secondary, fever. Lastly, the inoculation of this matter performed upon individuals who have never had such an eruption, and who have never been vaccinated nor been affected with small-pox, may cause the development of legitimate variola of various degrees of severity, as has been demonstrated by the experiments of Messrs. Dugat and Lafont-Gouzi, in opposition to the opinion of M. Gendrin, who had maintained that varioloid was transmitted by inoculation without ever approaching variola in its characters. Further, small-pox has been seen rising from the contagion of pustular varicella, and pustular varicella springing from the contagion of small-pox. In the Marseilles epidemic

present argument. In his time, we see that the liability of small-pox coming on after vaccination, was thought to depend on the recency of this latter operation, merely, we presume, by a process of negative reasoning, for there were no opportunities to ascertain the liability of those vaccinated for a length of time, as the practice was then but of few years' adoption. In our day, we have seen an opposite opinion held, viz., the greater susceptibility to small-pox in those vaccinated for a term of years. Experience has shown long ago the fallacy of the first belief; the second must, we think, be abandoned on the same showing."

mic a young man who had neglected vaccination was attacked with small-pox and died; his cousin, bearing handsome points of cow-pox pustules upon his person, went to visit this young man, and caught a pustular varicella; at the same time a brother, who had not been vaccinated, was infected with the most characteristic small-pox imaginable by others of the family who had been vaccinated and were now labouring under pustular varicella.

448. *Diagnosis.*—During the first week the resemblance between variola and umbilicated pustular varicella is such, that there is no means of distinguishing between them.

The pustular varicella differs from confluent small-pox in the more rapid progress of its pustules when they have attained their height, and in the non-occurrence of secondary fever; the areolæ are also inflamed in a less degree, and the pustules are more rarely followed by cicatrices.

This species of varicella differs from distinct small-pox, not, as has been stated, in the extreme irregularity and rapidity of its course, which is often as regular as that of small-pox, but by the entire absence of secondary fever.

449. According to Dr. Lüdgers, of Copenhagen, the pustular varicella (varioid) differs from small-pox in the irregularity of its course, the uncertainty of its symptoms, the mode in which its pustules appear, which is in successive masses, occupying first the extremities, then the trunk, and lastly, the face; in the imperfection of the suppurative stage, the promptitude with which the desiccation is completed, and the failure of the secondary fever. In my opinion, it is to this last circumstance that we are especially to cling; for, in the majority of cases, pustular varicella advances with the greatest regularity, and variola itself is not without a considerable number of individual anomalies.

Others imagine that pustular varicella differs from variola in this, that the inflammation extends to the substance of the corion in variola, whilst in the varicella, it stops at the surface of the papillary body, which is the reason of its seldom leaving cicatrices after the fall of the scabs.

It has also been said that the pustules of *modified* small-pox consisted of no more than a single cavity; but this peculiarly belongs to the varicellæ with globular and conoidal pustules alone.

M. Gendrin maintained that umbilicated pustular varicella (varioid) differed from small-pox in the structure of the pustules, which, in the varioid, contained no fluid, did not appear multilocular, and always ended in resolution. M. Guersent has, with justice, disputed the accuracy of this proposition; after a careful examination of the pustules of variola, and of varioid, during the course of the first week, he was frequently unable to perceive any difference between the one and the other. My own researches agree with those of M. Guersent, § 440; and M. Gendrin's statements respecting the structure of the varioid pustule, are, in truth, only applicable to a very rare variety of varicella, namely, the papular.

*Ptyalism* is a symptom in small-pox which only happens among adults, and cannot be assumed as a feature distinguishing true small-pox from pustular varicella.

The *odour* of small-pox has been said to be different from that of pustular varicella; if such be the fact, it requires such delicacy of organ to appreciate the circumstance, that it can never be made available in practice.

450. Messrs. Favart and Robert, of Marseilles,<sup>1</sup> perceived full well that umbilicated pustular varicella (varioid), followed the same course as the confluent small-pox, during the periods of incubation and eruption, and that the two diseases first assumed different characters after these periods: small-pox continues to pursue its course; to the swelling of the face succeeds that of the hands; the pustules go on increasing, and acquire a whitish colour; the inflammation of the face and hands is then at its height; the spaces between the pustules become of a bright red; the fever, which has been almost insensible since the appearance of the eruption, is lighted up afresh, constituting the secondary or suppurative fever; the pustules of the face, followed immediately afterwards by those of the hands and other parts of the body, pass from white to yellow; lastly, the tume-

<sup>1</sup> Robert. *Précis historique de l'épidémie qui a régné à Marseille, et vues nouvelles sur la vaccine.* Marseille, 1828.



faction of the face subsides, the eyelids become of their natural size, and the patient regains the use of his sight (this happens on the tenth or eleventh day); from this period the pustules grow brown, shrink, become hard and dry, and the friable crust is detached from the twentieth to the twenty-fifth or thirtieth day from the invasion, leaving exposed the deep cicatrices that ever afterwards proclaim the attack of the disease, at first of a deep red colour, and only in the progress of time acquiring something of the tone of the skin. In the umbilicated pustular varicella (varioid), on the contrary, the suppurating stage is stationary, and there is no secondary fever; arrived at the eighth, ninth, or tenth day, the disease stops of itself, the pustules dry up, and the crusts fall off from the skin towards the twelfth, thirteenth, or fourteenth day.

To resume, if there be pretty evident differences between confluent variola and the umbilicated pustular varicella, this disease is assimilated in numerous particulars, with distinct variola, from which, however, it still differs, by the constantly progressive state of its pustules during what should be the stationary and suppurating periods, and the absence of the secondary fever.

The flattened and frequently umbilicated form of the pustules sufficiently distinguishes this from the other varieties of pustular varicella.

451. *Prognosis*.—The eruption of the umbilicated pustular varicella is usually distinct; and, as has already repeatedly been said, is unaccompanied by secondary fever. Neither does it present the formidable symptoms of *nervous* variola, of *laryngeal* variola, nor of *hemorrhagic* variola. It is therefore usually a disease of little severity. During the epidemic of Marseilles, nevertheless, twenty persons who had been vaccinated died, and in several others the attack possessed a character of great severity.

This modified small-pox may even occasionally present more formidable symptoms than legitimate distinct variola.

Pustular umbilicated varicella (varioid) preserves occasionally at least, if it does not uniformly give security from small-pox. In an epidemic small-pox which appeared at St. Paul-de-Leon, in 1826, M. Guillon having inoculated six hundred and sixty children with the matter from the pustules of a vaccinated subject labouring under the prevailing disease, the greater number had nothing more than a local eruption analogous to that of cow-pox or inoculated variola, and not one of them contracted small-pox. Messrs. Gendrin and Cullerier have also seen varioid taking the place of variola; M. Bourgeois saw two children, who, after having had the varioid, tended with impunity two brothers attacked with variola; lastly, M. Cullerier inoculated children who had never had more than the *varioid* with the matter of *small-pox*, without the operation being followed by any eruption. However this may be, my own opinion is that the umbilicated pustular varicella does not give immunity against small-pox to the same degree as cow-pox and legitimate variola.

The time which has elapsed between the vaccination, or a previous attack of variola, and the evolution of umbilicated pustular varicella, does not appear to cause any modification in the progress and severity of this eruption. Thus, this species of varicella has been seen of considerable severity in individuals vaccinated but a few weeks previously, and, on the contrary, with a character of extreme mildness in persons who had been vaccinated, or who had had the small-pox twenty years before. (a)

452. The *treatment* of umbilicated pustular varicella is the same as that of distinct small-pox.

453. Although individuals have been subjected to the influence of natural or inoculated small-pox, or to that of cow-pox, it has been proposed to re-vaccinate them from time to time, with a view to render them unsusceptible of the attacks of the pustular varicella (*vide* Vaccinia).

#### Historical Notices and Particular Cases.

454. The umbilicated pustular varicella is probably as old a disease as small-pox itself, for it is indisputable that eruptions of a

(a) This assertion, of the entire accuracy of which I have had abundant evidence, merits serious attention; and is a sufficient reply to those who would persuade us that vaccinia wears itself out after a certain period.

similar nature were observed among those who had had the small-pox naturally, or by inoculation,<sup>1</sup> long before the development of this modification of variola was made the subject of particular study in the vaccinated, among whom it occurs most frequently. A very considerable number of the vaccinated have been attacked in each of the small-pox epidemics that have recently prevailed; and the vaccinators have spoken of it as a *spurious small-pox*, due to a faultily performed or imperfectly developed cow-pox inoculation, or as a variety of *varicella* produced by a peculiar and specific contagion. The opponents of vaccination again, and those who believed that cow-pox did not always afford security against variola, have triumphantly pointed to this eruption as a legitimate small-pox, and assumed its occurrence as proof positive of the inefficacy of vaccinia as a preservative from this formidable disease.<sup>2</sup> Lastly, Dr. Eichhorn has published a new division of the variolous eruptions observed among the vaccinated.<sup>3</sup>

455. Some writers, having given the title of *varioid* to all the varioliform eruptions observed among individuals who have been vaccinated, have described these eruptions with such generic characters as are rather to be met with in the conoidal and pustular varieties of varicella, than in the umbilicated pustular form of the disease. Thus it has been said, that elevation, and basilar induration of the pustules were scarcely to be detected; that their areola was irregular and badly defined; that after the fourth day the apices of the spots were of a pale watery white; on the fifth, that they became serous and rounded; on the sixth, that the fever and areola disappeared; that the serum occasionally became opaque or red without assuming the purulent character; that it escaped from the greater number of the pustules, and was absorbed from the remainder; lastly, that the seventh day was marked by the desiccation of the pustules and the convalescence of the patient.

<sup>1</sup> Thomson. Hist. sketch of small-pox, 8vo. Lond., 1822.

<sup>2</sup> Pougens. Petite-vérole chez plus de deux cents individus vaccinés, observée à Milhau, en 1817, 8vo. Milhau, 1817.—Gastellier. Exposé fidèle de petites-véroles survenues après la vaccination, 8vo. Paris, 1819.

<sup>3</sup> Dr. Eichhorn divides the variolous eruptions observed among the vaccinated into: 1. *True variola*.—2. *Purulent varioid*, differing from the former only in the speedy desiccation of the pustules, and the absence of secondary fever, although the oedematous swelling of the skin proper to the legitimate small-pox occurs here also, during the suppurative stage.—3. *Lymphatic varioid*, the eruption being full of transparent fluid. 4. *Verrucous or warty varioid*, the spots remaining solid to the end and never becoming filled with fluid. 5. *Papular varioid*; a disease which occasionally appears to be attended with danger, and not merely a *modified* but a *true* small-pox under a papular form. 6. *Varioid fever*.

Dr. Eichhorn attaches the greatest importance to the umbilicated depression; if but one spot of an eruption present this character, he holds it warrant enough of the varioid nature of the disease. This author also designates as *pustular* a spot, that is *umbilicated*, whether it contain *pus* or *lymph*; he reserves the title of *vesicles* to spots filled with *lymph* and *not umbilicated*: the *varioid spot*, whether filled with *pus* or *lymph*, or *solid*, is depressed in the centre, or umbilicated; the *varicellar spot* may be *purulent*, may be a *true pustule*, but it is not umbilicated.

Eichhorn maintains that *varicellæ* only excite *varicellæ*, and never variola or varioid, and concludes that varicella is the effect of a peculiar contagion. He distinguishes this disease into: 1. *Vesicular, bullous or globular*, and, 2. *Cellular or pustular* varicella. The former has occasionally been mistaken for pemphigus; the latter is not completely emptied by a puncture. The pustular varicella presents a considerable number of varieties:

(a) *Lenticular or lymphatic* varicella, the eruption of which appears either flattened or pointed, and is afterwards filled with purulent serum. (b) *Verrucous* varicella (horn-pock, stone-pock) shaped like the former, but solid and warty; its point is also distended with a lymphatic or purulent fluid. (c) *Conoidal or acuminate* varicella; the eruption of which is pointed. (d) *Spongy* varicella which seems to be intermediate between a and b; the eruption in either of them swelling and becoming *spongy*. The whole of these forms arise from one cause,—the *varicellar contagion*.

The diagnosis of varioid from varicella, according to the same author, is as follows: 1. During the period of eruption, variola and varioid present stigmata of a dusky red, ill defined, without hard nuclei, and are succeeded by soft pustules or vesicles, most commonly after an interval of no more than six hours, in consequence of which papulæ are not usually observed. 2. At the height of the disease, the pustules of varioid are umbilicated. Several among those of varioid have the depressed centre also. The pustules, vesicles, or whatever they be, of varicella never show this characteristic feature. 3. During the period of desiccation, variola and varioid are followed by scabs in the form of sections of a cone; varicella never leaves crusts of this shape. 4. The cicatrices left by variola and varioid are ragged or uneven. Varicellæ only give rise to cicatrices, when they have been excoriated, or a purulent fluid has been long confined within their interiors. These cicatrices also when they do occur, are smooth on the edges and even, and not always of a round, but frequently of an oval form.

Although I do not agree with Dr. Eichhorn in all his opinions, I have thought it fair to give a statement of them from the great pains he has been at to develop them fully. (*Vide* Eichhorn. Neue Entdeckungen über die Verhütung der Menschenblattern bei Vaccinirten, 8vo. Leips., 1829.)



Eichhorn considers the varioloid disease as a modification of small-pox, from which it differs in being unaccompanied by secondary fever. He thinks, too, that the varicellar eruptions are produced under the influence of a specific contagion, distinct from that of small-pox and varioloid.

In these latter times many observations and inquiries have been made into the characters<sup>1</sup>, and the inoculation<sup>2</sup> of the pustular variellæ (the varioloid of many modern authors). Some remarks of a comparative nature have also been published on the modified pustular diseases of sheep denominated Clavelée in France,<sup>3</sup> which is transmissible by inoculation.

CASE LXVI.—*Umbilicated pustular varicella occurring during the epidemic prevalence of small-pox in an individual previously vaccinated.* M. Fl., twenty-three years of age, began to complain on the 18th of September, 1825, of a feeling of fatigue, uneasiness, and disrelish for food: an epidemic small-pox prevailed at this time in Paris. M. Fl. had been vaccinated in his youth, and his arm bore marks of the cicatrices left by regular cow-pox. The state of uneasiness described continued through the 19th; on the 20th, he felt greatly depressed, yet went abroad; on returning home in the evening he had a violent shivering fit, accompanied with distracting headache. He passed the night without sleep, feverish and restless. On the 21st, epigastric heat and pain; nausea; tongue foul, and red at the point; headache; shivering fit, to find relief from which, M. Fl. took a hot bath at a high temperature, but the symptoms did not continue with the less violence. On coming out of the bath he went to bed; he was sick, and repeatedly vomited a quantity of bilious stuff during the day, and course of the succeeding night; the head was excessively hot, the legs extremely cold. On the 22d, I was summoned. I found the patient vomiting, and he informed me that the slightest movement was enough to induce the act, which was accompanied by violent convulsive motions of the stomach, and painful eructations (*twenty-five leeches to the epigastric region; mucilaginous drink*). The leeches continued attached for two hours; after their fall the bites were covered with an emollient cataplasm. In the evening the patient was delirious, and this state continued far into the night (*weakened mustard cataplasms to the insteps; drink as before*). At midnight, (fourth or fifth day of the disease,) an eruption was discovered, especially upon the breast, very much resembling flea bites in its appearance. 23d.—Several small distinct red pustules were scattered over the trunk and extremities; a few were also situated on the face; the patient had perspired profusely; the headache and vomiting had diminished. 24th.—Second day of the eruption, which is now very abundant on the face; the headache had ceased; the vomiting returned again at night; the perspiration was incessant and copious (*barley water for drink*). The night was pretty tranquil. 25th.—Third day of the eruption, which is making marked progress; the pustules are also becoming more numerous. The sweating has now ceased: the patient complains of a tense, stiff, and burning sensation in his face, as if it was covered with a mask of fire. In the afternoon, the patient rambled in his talk for about a quarter of an hour; in the evening he was quieter (*barley water with one-fourth part of milk*). 26th.—Fourth day of the eruption; no sleep last night; the pain of the face very distressing; restlessness; the patient rambles from time to time, and complains repeatedly of heaviness of his head. The foot bath three times a day relieved this symptom. The urine, which was high-coloured for the first few days, has been transparent and yellow during the last three. The pustules of the thighs are now well evolved. 27th.—Fifth day

of the eruption; the conjunctivæ are injected; every part of the surface of the body from the crown of the head to the soles of the feet, as well as the lining of the mouth, and the mucous membrane of the glans is covered with pustules. These are in greatest numbers on the breast, thighs and face; eight were counted on the forehead, and one hundred and nineteen on one of the cheeks.

Some, indeed the greater number, of the pustules are voluminous, regularly circular, flattened, depressed in the centre and without areola, or surrounded at most by a very pale pink circle. The matter of the pustules is neither watery nor sero-purulent. They are firm and rather unyielding to the touch; and are evidently distended by a concrete substance which does not flow out when the cuticle which covers them is punctured or is removed. Several pustules are observed of a larger size, of an irregular shape, and evidently formed by the fusion of two or three of the ordinary pustules into one. Others of a smaller size and globular are about a line in diameter filled with an opaque and whitish fluid, and surrounded by a red and pretty regularly circular areola, interrupted, however, in those situations where the pustules are confluent, or where pustules of a larger size are approached. The part of the skin upon which pustules of the latter description are developed is erythematous. Lastly, not more than from fifteen to twenty small conical pustules can be counted over the whole surface of the body; the generality are flattened and umbilicated. The patient has no cough, and no affection of the bowels; the pulse is natural; the tongue is covered with a thick white fur, and there is little thirst (*pediluvium; barley-water*). The heat of the face was now greatly lessened; all the stormy symptoms had subsided and the patient slept. 28th.—Sixth day of the eruption. The whole of the pustules of the face were in full suppuration; three or four on the nose and several on the cheek presented a black, dry, central point. Several, on different parts of the body, seemed to have stopped short and were no larger than those of impetigo. The pustules of the face were not so flat, and were whiter and more purulent than those of the hands; the rest were pink-coloured; the tongue was getting gradually cleaner. 29th.—Seventh day of the eruption. Tranquil and uninterrupted sleep through the preceding night. The progress of the pustules presents some variety: those of the hands that are flattened and umbilicated have not yet changed either their form or their colour. Several of the same description situated on the forearm are purulent and have a yellowish-white tint; others on the nose and trunk are yellow and almost dry, with a crust in their centre (*barley water with milk; chicken-broth*). 30th.—Eighth day of the eruption. An excellent night; the detachment of the crusts going on; from the face, the greater number have already fallen, leaving small red marks behind them, each of which presents a central, more highly-coloured and depressed point. None of these spots has the livid colour of those that follow legitimate small-pox. The pustules on different parts of the body are shrinking apace; the tongue is moist and white in the middle. (*Broth, semolina*.)

31st.—Ninth day of the eruption, thirteenth of the disease. The night has not been so quiet; quantities of small lamellar scabs are found in the bed, having the form and dimensions of lentils. The pustules dry up without rupture of the epidermis; the appetite has returned, and the convalescence is complete.

A few small cicatrices were left on the face bearing a striking resemblance to those of small-pox. Two months after the invasion the marks of the disease had not entirely disappeared.

Few cases of varicella occur with so many points of resemblance to small-pox as the one just detailed. The eruption, in fact, took place on the fourth day from the attack, after severe precursory symptoms, such as delirium and repeated attacks of vomiting, and during the prevalence of an epidemic variola. The eruption consisted of numerous flattened and umbilicated pustules, and the face was puffed and inflamed; but the eruption differed from that of small-pox in the rapidity of its progress, which was such that the whole of the pustules were dry by the thirteenth day of the disease, and in the complete absence of pyralism and non-occurrence of secondary fever.

<sup>1</sup> Thomson. An account of the varioloid epidemic which has lately prevailed in Edinburgh and other parts of Scotland, etc. 8vo. Lond., 1820.—Gregory. Considérations sur la petite-vérole qui se développe chez des sujets préalablement vaccinés (Arch. gén. méd., t. iv. p. t. 289;—x. p. 443).—Lüders. Essai historique sur ces varioles qui s'observent chez des sujets préalablement vaccinés (in Danish), 8vo. Altona, 1824. Extrait dans les arch. génér. de méd., t. viii. p. 123.—Gendrin. Sur la nature et la contagion de la variole, de la vaccine et de la varioloïde (Journ. gén., t. xcvi. p. 331; t. xcix. p. 154).—Kuster. Notice sur la varioloïde (Journ. complém. des sc. médic., t. xxxiii. p. 105).—Copretta. Sur la variole des sujets vaccinés dite varioloïde (Journ. complém., t. xxiv. p. 20).—Robert (M. C. S. M.). Obs. sur la variole, la varioloïde et la vaccine (Journ. gén. de méd., 2e série, t. ix. p. 77).

<sup>2</sup> Guillon. Mém. sur l'inoculation de la varioloïde (Bull. des sc. méd. de Férussac, t. xxiv. p. 325; t. xxv. p. 33).—Bousquet. Nouvelle inoculation de la varioloïde (Revue méd., Paris, 1830, t. xxv. p. 253).—Robert Venables. Sur la propriété contagieuse des varioles modifiées (Revue médic., t. viii. 1825, p. 315).

<sup>3</sup> Pisani et Libbald. Archiv. génér. de méd., t. xvii. p. 439.



## 2. CONOIDAL PUSTULAR VARICELLA.

Vocab. *Varicella coniformis* (Willan); *Varicella* (Plenck); *Swine-pox*.

456. In this variety the eruption is preceded by febrile symptoms, occasionally of great severity, which last for two or three days. Frequently also at the end of twenty-four hours a crop of small red spots, similar to flea-bites, appears upon different regions of the body, and change for the most part into *pointed* elevations like those of small-pox in their first stage. The day after their appearance these risings preserve their original form, and exhibit an *opaque white speck* on their summits; they are never completely transparent like the vesicles of *chicken-pox*. Their bases are not so hard, nor so much inflamed as those of the pustules of small-pox, but more so than those of the vesicles of chicken-pox. The fever usually ceases after the eruption appears. On the third day the bases of the spots are more inflamed; on the fourth and fifth days they continue nearly in the same state; on the sixth they begin to shrivel and to dry upon their summits. On the seventh those of the face are transformed into prominent crusts of a yellow or yellowish-brown colour. On the eighth and ninth these crusts are detached, many of them leaving small cicatrices. On the following days the scabs fall from the other parts of the body.

The pustules of this variety of varicella may be developed successively so as to protract the eruption to the twelfth or thirteenth day.

The pustular conoidal varicella is observed during the epidemic prevalence of small-pox, most commonly attacking those who have been vaccinated, and occasionally those who have already had small-pox. This form is always well marked on the face; a number of umbilicated pustules, however, are often observed on the thighs.

M. Fontaneilles has shown that this form of varicella could be transmitted by inoculation.<sup>1</sup>

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457. The pustular *conoidal* varicella was described by Willan, who classed it among the *vesicular* diseases. It is indisputable, however, that an *opaque white point* is almost uniformly developed on the apices of the eruption, in consequence of the formation of a false membrane, and that the greater number of the spots become purulent before their termination. I have collected several cases of this variety myself; the one which follows I have borrowed from Messieurs Bérard and Delavit.

CASE LXVII.—*Conoidal pustular varicella*.<sup>2</sup> Louis, aged fifteen, and having been vaccinated, was seized in the evening with alternate chills and flushes, supra-orbital headache, lassitude, and pain of the limbs. Second day, the same symptoms continued; an eruption of a number of spots (*boutons*) appeared on the hands; these were at first of a red colour, but became white within a few hours. Their centre, uniformly raised, ended in a point. They are but little elevated above the level of the skin, and surrounded by a broadish pale red circle; they disappear on pressure, which is not painful. Second day of the eruption: additional spots developed on the face, exactly similar to those that have been already described. Third day: headache over the eyes, intolerance of light, tongue yellow, with red spots on its edges, mouth clammy, pain of epigastrium increased on pressure; the pustules of the hands are dry, and present in their centres a pale, gray and slightly adherent scab; they are surrounded by an areola of greater breadth than on the preceding days; those of the face are small and white; some of them present a gray point in the centre, which is not depressed, and are surrounded by a rosy circle, which melts into the natural colour of the skin. New pustules have appeared on the arms; these are red and of small size; their colour disappears on pressure, and they are surrounded by a broad areola (*tartrate of antimony*). The medicine caused vomiting of yellow matters; the bowels were relaxed; the belly felt hard and painful; perspiration; pulse natural; heat of surface not raised. Fourth day: no sleep, slight perspiration, headache, tongue as it appears in the best state of health; the pustules of the face are larger,

more prominent and whiter; the areolæ still broader; the pustules of the arms are white and silvery in their centre; no pustules are observed on the breast or lower extremities. Fifth day: the pustules of the face are shrunk, dry, and covered with a gray scab, which is flat and slightly raised above the surface of the skin; several of those of the arms have also dried, and formed red scabs, raised above the surface, rounded, and with the appearance of the pustules (*boutons*) of verrucous small-pox. Sixth day: general and profuse perspiration during the night; disappearance of all the morbid symptoms; the patient feeling perfectly well; the crusts of the face began to be detached, leaving in their place a slight red mark level with the skin. Seventh: recovery.

## 3. GLOBOSE PUSTULAR VARICELLA.

Vocab. *Hives*, *Varicella*.

458. In this variety the precursory symptoms are commonly more severe than in chicken-pox, and now and then approach those of small-pox in their long continuance and intensity.

The eruption appears in the form of red spots, larger than those of the preceding variety, occasionally wearing the aspect of a large papula, or bite of a gnat, and which, in the course of twenty-four or forty-eight hours, change into globular elevations, whose bases are not precisely circular, and whose centres are of a dull milky white colour. On the third and fourth days the eruption is propagated to different regions of the body; on the fifth, and often even on the fourth day the pustules become rounded, and the areola which surrounds them grows brighter; the pustules have then attained their greatest size, which occasionally equals that of the crystalline lens; they are of a dull white colour on their centres, upon which a kind of little disc, iridescent in its circumference, is observed; but they are transparent in their parts nearest their base. When they are opened with a lancet, and the epidermis is removed through the whole extent in which it is loosened, the opacity and central *whiteness* are found to be produced by a small pseudo-membranous disc, which differs from that of true small-pox in not extending over the entire surface of the pustule. On the sixth day, the circumference of the pustules passes or overhangs their bases, which are inflamed; next day many of them are soft and flaccid to the touch; the day following they are shrunk and wrinkled in their circumference; the eighth and ninth days, the desiccation advances, and laminated brownish crusts are taking the places of the pustules; on the tenth and eleventh, these scabs are detached from the skin, upon which marks of a deep red colour, and occasionally even cicatrices remain.

A few pustules are very frequently to be found, presenting the characters of the preceding varicellar eruptions, scattered among those which characterize the variety now under consideration.

As there is always some degree of pruritus of the skin, children are apt to tear the pustules with their nails; and the crusts which succeed them, now and then continue adherent for a long time, and leave small cicatrices when they are at length detached.

The eruption taking place successively during two and three days, pustules in different stages of their progress may always be found at the same time in patients labouring under the disease.

It may be transmitted by contagion, although the inoculation of its virus often remains without ulterior consequences.

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459. Willan describes this variety of varicella as *vesicular*; but the spots have a *purulent* appearance in their centre, from the second day, in consequence of containing, like those of small-pox, a pseudo-membranous disc attached to the inner surface of the epidermis. I here republish the case of President d'Héricourt as an instance of this variety exhibiting general symptoms of some severity; the evolution and appearances of the eruption have not been described with sufficient care.

CASE LXVIII.—*Globose pustular varicella*.<sup>3</sup>—M. d'Héricourt, on

<sup>1</sup> Epidémie de Milhau, pp. 47—51.

<sup>2</sup> Bérard et Delavit. Op. cit. p. 129.

<sup>3</sup> Darcet. Hist. de l'éruption du Président d'Héricourt. Journ. de méd., t. 49, p. 303. 1798.



the 24th November, passed a bad and restless night. 25th.—Second day of the disease, the head was heavy and confused; there was pain of the stomach, and particularly of the fronts of the thighs and under the knees; the body was bent; the use of the foot-bath was followed by a fainting fit. 26th.—Same state; the night had been worse; no sleep; burning heat with passing chills. 27th.—Third day of the disease; several stains or small spots (*boutons*) were discovered on the face and neck; soon afterwards the patient felt himself worse than he had yet been, and was compelled to return to his bed. 28th.—Fourth day of the disease (second of the eruption.) The patient was still very ill, complaining of headache, and very distressing pain in the stomach, loins, and thighs; the eruption was more conspicuous, and in the evening sore throat was added to the list of sufferings (*the foot bath*). The patient perspired freely, and the eruption continued to be evolved; at one time the face appeared very full. The night was no better. 29th.—Fifth day of the disease. M. d'Héricourt was now told that he had small-pox, his medical attendant informing him that he would have communicated the matter before, but feared that he might be deceived, and his patient distressed by supposing himself attacked anew with this disease after having had it by way of inoculation. This day was more tranquil, and the night that followed, better than the five which had preceded it. 30th.—The eruption seemed to be completed; yet the patient again suffered severely from fever, and lost a few drops of blood by the nose. The night was stormy till about two o'clock in the morning of the 1st December, when the patient fell asleep. This day (fifth of the eruption) M. d'Héricourt was much better. Suppuration was established in the face, where there were no more than from a dozen to fifteen pustules (*boutons*), and extended gradually to the other parts of the body where the eruption was much fuller, especially on the back, on the arms, thighs, ears and hairy scalp. *The pustules (boutons) rose and became well rounded; the matter with which they were filled was already opaque and white, and they were surrounded by a red circle or areola perfectly characterized.* 2d.—Sixth day of the eruption; suppuration of the face completed, and well advanced over the rest of the body. *Several pustules, and these the smallest, already begin to dry off at their summits.* The patient, who had hitherto been kept extremely low, was allowed to take food for which he felt very much inclined. On the 3d December, seventh day of the eruption, the desiccation was well advanced, and the patient felt able to rise in the afternoon. 4th.—The strength returned with the appetite, and the patient who had had no passage in the bowels for three days, obtained to-day a copious and healthy evacuation. 5th.—(ninth of the eruption). The pustules of the face were completely dry,—it was forgotten to be stated sooner, that no salivation has occurred. From this time the pustules dried up, the scabs fell off, and the patient made a rapid recovery. A single pustule only left a mark on the face which will probably never wear out, and which is easily distinguishable from those that remain after the inoculated small-pox. The red marks of the pustules continued longer visible on the body than on the face.

#### 4. PAPULAR VARICELLA.

Vocab. *Ilorn-Pox.*

460. This variety does not differ from the others save in the circumstance that the greater number of the spots seem to miscarry, or to stop short at their first stage. In fact, after the precursory symptoms of a varicellar eruption, a crop of smaller or larger red-coloured papulæ is discovered upon the skin, which dry up or shrink away without being followed by crusts, never seeming to contain either pustular or pseudo-membranous matter in their interior. These papulæ are very generally mixed with a few of the lenticular vesicles of chicken-pox, or of the conical pustules which distinguish another variety of varicella; a circumstance which, added to the character of the prevailing epidemic, contributes to enlighten us in regard to the diagnosis. It is also common enough to meet with these varicellar papulæ scattered among the vesicular or pustular spots of the other varieties.

*Papular varicella* has been produced by inoculating with small-pox virus, individuals who had been previously inoculated or attacked with variola.

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461. Cases and observations on this disease have been published by Black.<sup>1</sup> Peter Frank mentions this variety in his *Epitome*, under the title of *varicella solidescens*. It must be a very rare disease; I have never met with it myself, though I have repeatedly seen papular elevations scattered among the pustules of the conical varicella, and the vesicles of chicken-pox. Sims<sup>2</sup> has given an account of an epidemic *modified* small-pox, under the objectionable title of *chicken-pox*, in which *papular* and *globular varicellæ* were observed.

#### 5. VESICULAR VARICELLA. CHICKEN-POX.

Vocab. *Chicken-pox, Varicella Lymphatica.*

462. *Symptoms.*—The attack of vesicular varicella is preceded by slight febrile symptoms, which continue for twelve, or at longest forty-eight hours. The febrile state, indeed, is often so slight as to escape notice,—a little depression and headache do not prevent children from engaging in their usual play. Such extreme mildness in the precursory symptoms of chicken-pox is not, however, an invariable circumstance; in some rare cases the invasion of the disease is proclaimed by violent pains of the epigastrium, nausea, vomiting, &c.<sup>3</sup>

The eruption of chicken-pox, although usually distinct, is occasionally confluent.<sup>4</sup> On the first day of its appearance it is characterized by small red superficial and oblong or nearly circular spots, of larger size, and more irregular in their outline when they are formed by two or more fused together. In the course of the next day a prominent vesicle filled with a perfectly transparent and colourless or pale citrine tinted fluid, which flows out readily when the cuticle is pricked, is developed in the centre of the greater number of these prominent spots. On the second day this vesicle is nearly a line and a half in diameter; it becomes *pointed*, or it increases a little more slowly over a larger surface, assuming a rounded form. New spots appear successively, in the centres of the majority of which, a vesicle soon arises, their bases being occasionally a good deal inflamed. On the third day the colour of the lymph becomes yellowish, and this is the only change the vesicles are found to have undergone. On the fourth day, such vesicles as have not been accidentally ruptured, shrink in size, and grow wrinkled in their circumference. On the fifth, a small scab, which is adherent to the skin, forms on the centres of the vesicles, and a small quantity of turbid lymph is included in their circumference, a change which occasionally gives them an umbilicated appearance. On the sixth, small yellowish or brown scabs replace the vesicles. On the seventh and eighth, the scabs fall off and expose red and undepressed marks upon the surface of the skin, which continue visible for a few days longer.

During the course of this eruption, many of the elevations seem to abort: some remain in the state of *simple stains*, or *papular elevations*, and gradually disappear; others are surmounted by a very small vesicle only, which either bursts or shrinks away in a very short space of time.

*Distinct* vesicular varicella is commonly accompanied by only a very slight derangement of the functions of digestion and circulation. When the eruption is *confluent*, the general symptoms are usually more severe.

When the eruption proves successive, and is preceded or followed by other affections, such as erysipelas and ophthalmia, which are usually ascribed to its influence, or when such affections happen to occur at the same time as the vesicular varicella, the disease may be protracted through a period of two or three weeks.

<sup>1</sup> Black, in *Edinb. Med. and Surg. Journ.*, vol. xv. p. 41.

<sup>2</sup> Sims. *Obs. on epidem. diseases*, 8vo. Lond., 1773.

<sup>3</sup> Sims, *ut supra*, p. 115.

<sup>4</sup> Ring. A case of confluent chicken-pox. *Med. and Phys. Journ.*, v. 14, p. 141.



463. *Causes*.—Chicken-pox may be transmitted by the inoculation of the serous fluid of its vesicles, or of that of the pustules of the umbilicated, conical, and globular varieties of varicella, or by the air charged with the contagious miasm of either of these. "I remember on two different occasions," says Vieusseux, of Geneva, "to have seen a transient SMALL-POX, the pustules of which continued five or six days; they were full of opaque white pus, and were surrounded by such an inflamed circle as made me suspect them to be no true cases of small-pox, the more as I knew that one of the children affected had had this disease, and that the other infected his brother and sister with an eruption which was merely the common transient small-pox (*la petite vérole volante ordinaire*)."

Vesicular varicella or chicken-pox may produce legitimate small-pox, and true small-pox may engender chicken-pox. (§ 406.)

Chicken-pox is a disease which occurs almost exclusively among children; I have, however, seen it in adults and persons of riper years; Messrs. Hesse and Stieglitz were consequently mistaken when they stated that it only attacked the young. It is contagious, but in a less degree than small-pox and pustular varicella, and is transmissible by inoculation. This fact has been lately disputed very malapropos; for Willan and others succeeded long ago in propagating the disease in this way.

464. A certain number of cases of chicken-pox are almost invariably observed during the epidemic prevalence of small-pox, and of pustular varicella; or otherwise, chicken-pox very frequently follows these.

465. I have already said that chicken-pox appeared to me one of the varieties of the variolous eruption. Dr. Eichhorn,<sup>1</sup> however, assures us that he has observed vesicular variola prevailing epidemically when no cases of variola were encountered; and Mr. Barnes<sup>2</sup> has given a notice of an epidemic chicken-pox which prevailed at Carlisle in 1826, at a time when no case of small-pox had been seen for several months.

The epidemic occurrence of chicken-pox, independently of the other variolous eruptions, is extremely rare.<sup>3</sup> At Carlisle, small-pox had prevailed some months previously; and the chicken-pox was perhaps a last effort or effect of a variolous medical constitution. But in whatever manner this fact be interpreted, there is another much more satisfactorily demonstrated circumstance, namely, the almost constant occurrence of chicken-pox during the epidemic prevalence of small-pox. Other facts, moreover, prove that these two diseases are the effects of one and the same common contagion. (§ 406.)

466. *Diagnosis*.—When the vesicles of chicken-pox are fully developed, it cannot be mistaken for any other of the variolous eruptions, as it alone appears at the period of its height under the form of completely transparent vesicles.

The eruption in chicken-pox is general and scattered over the whole surface of the body, very differently therefore from the manner in which the vesicles of herpes phlyctenodes appear clustered together, and occupying a limited number of regions.

Acute pemphigus is characterized by bullæ, and not by vesicles; it is not contagious, and occurs independently of the prevalence of variolous medical constitutions.

When P. Frank described chicken-pox under the title of pemphigus varioloides, thus uniting two most dissimilar diseases in the same group, he evidently suffered himself to be led into error by a mistaken analogy.<sup>4</sup>

<sup>1</sup> Eichhorn. Handbuch über die Behandlung und Verhütung der contagiösfieberhaften exantheme, p. 437.

<sup>2</sup> Barnes (Thom.). Sketch of an epidemic varicella, which prevailed at Carlisle in the summer and autumn of 1826. (Edinb. Med. and Surg. Journ., vol. xxvii. p. 61.)

<sup>3</sup> I have looked through the indices of a great number of periodicals, such as the Journ. génér. de médecine, the Archives gén. de méd., the Journ. der Heilkunde of Hufeland, the Edinb. Med. and Surg. Journ., the Bibliothecæ of Ploucquet and the Repertorium of Reuss without meeting with any other instance of the occurrence of epidemic vesicular varicella, independently of prevalent variolous medical constitutions.

<sup>4</sup> It is even with more surprise that we find this author expressing himself as follows in another passage:

"Quas spurias dixere variolas, has, licet veras interdum præcedant ac annuntiare futuras videantur; licet ex insitione, cum pure varioloso ac optimo instituta, spurias provenisse referant variolas, ac licet ob similitudinem in multis cum variola legitima, tam communi, quam anomala sen abnormi, cum hac ipsa confundi facillime queant; ad aliud tamen morborum genus, utpote a variolis natura diversas, relegamus." De curand. hom. Morb. Epit., lib. iii. p. 97, 8vo. Vien., 1811.

467. The treatment of vesicular varicella is the same as that of distinct and benign small-pox.

Vesicular varicella does not give immunity from small-pox.

#### Historical Notices and particular Cases.

468. If at the present day there still prevails some obscurity in regard to various points in the history of vesicular varicella or chicken-pox, it is undoubtedly owing to several different kinds of eruption having been described under this title.<sup>5</sup> Besides the observations I have already mentioned, there are those of Willan,<sup>6</sup> who described three varieties of varicella according to the form of the vesicles, those of Heberden,<sup>7</sup> who was the first that imagined chicken-pox to be produced by a contagion different from that of small-pox, and those of Dr. Thomson,<sup>8</sup> who maintains, and in my opinion, has proved, that chicken-pox is a mere variety of variolous eruption, which all deserve to be particularly consulted.

CASE LXIX.—*Inoculated vesicular varicella* (Willan). M. P., aged seven years, was inoculated with the fluid of chicken-pox, October 23d, 1798, by two punctures in her right arm. October 24th.—A slight redness surrounded the punctures. 25th, 26th, and 27th.—The redness gradually increased, and was attended with a sensible hardness and elevation. 28th.—The appearances on the arm became much fainter. 30th.—Thinking the inoculation had failed, I did not inspect the arm again till the 3d of November, when she complained of an itching about one of the punctures. On examining the place, I found it red, elevated, and somewhat hard, with a small vesicle in its centre. November 4th.—The redness and hardness were much increased, and she complained of a sensation of tingling about the vesicle. Its size was equal to that of a variolous pustule on the seventh day after inoculation. In the evening, two small red eruptions appeared on her shoulder, and soon became vesicular. 5th.—The appearance on the arm continued the same, but no fresh vesicles were observed. 6th.—The redness on the arm was very faint; the hardness and elevations were abated. No further eruption appeared.

CASE LXX.—John Coles, aged ten months, took the chicken-pox by contagion, in July, 1799. On the third day of the eruption, he was inoculated from a pustule of the confluent small-pox. On the 9th and 10th he was feverish; pustule on the arm proceeding as usual. On the 11th, there were several small pustules round the place inoculated. On the 12th, an efflorescence appeared on the arm. On the 13th, there was an eruption of about 200 pustules. 18th.—The pustules had all suppurated. 20th.—Inoculated parts covered with a scab; pustules drying. Some of the vesicles of chicken-pox contained yellowish lymph, till the third day of variolous inoculation.

CASE LXXI.—Edmund Wilson, aged six months, was inoculated with chicken-pox, May 28th, by two punctures in the left arm. On the third day, May 30th, slight elevation and redness round the punctures. On the fifth day, more inflammation; in the middle of it, shining vesicles, flattish at the top, with an irregular margin. The child had been feverish the preceding night. He was inoculated this day with variolous matter, by two punctures on the right arm. Seventh day; the vesicles larger. Two other vesicles appeared on the left arm near the puncture. Ninth day, the primary vesicles broken; they appear bluish at the centre; there are many small vesicles around them. On the morning of the eighth day, the child was sick; through the succeeding night he was feverish and restless. Besides those round the punctures, there are twelve vesicles on different parts of the body, some of them rather indurated, others containing lymph. The pustules on the variolated arm are advancing. Tenth day: the child had a convulsive fit yesterday afternoon. He was feverish through the night, and had an efflorescence or rash over the whole body: vesicles broken and drying. Eleventh day, rash con-

<sup>5</sup> A sketch of the history of varicella, in a history of the variolous epidemic which occurred in Norwich. By John Cross, 8vo. Lond., 1820.

<sup>6</sup> Willan. On vaccination, 4to. Lond. 1806, chap. vii. On the chicken-pox and swine-pox.

<sup>7</sup> Heberden. Med. transact. of the College of Physicians of London, vol. i. p. 427. —This opinion of Heberden is adopted by Bryce (Edinb. Med. and Surg. Journ., vol. xiv. p. 467), by M. Eichhorn (op. cit.), and by Doctor Abercrombie.

<sup>8</sup> On the identity of chicken-pox and modified small-pox (Edinb. Med. Surg. Journ. v. xiv. pp. 518–657).



tinues; about fifty pustules appeared this morning. Vesicles on the left arm perfectly dry and scabbing. Pustules at the inoculated places on the right arm, much enlarged and surrounded by an efflorescence,—seventh day of variolous inoculation. On the fourteenth, the secondary variolous pustules are maturing, but they remain indented at the centre,—tenth day of variolous inoculation. Eighteenth day of the first inoculation,—fourteenth day of variolous inoculation—scabs over the places inoculated, the other pustules drying. Twenty-second day of variolous inoculation; pustules have been succeeded by scabs; some of them are separating.

#### 6. VARICELLAR FEVER (VARICELLÆ SINE VARICELLIS).

469. Certain fevers without eruption, arising from contagion of small-pox in individuals who have been vaccinated or inoculated, and from that of pustular or vesicular varicella, in subjects obnoxious to the influence of variolous contagion in all its shapes, have been described under the titles of *febris varicellosa*, and *febris varioloidosa*.

I have never myself seen a case of this kind of fever, for information on the nature and character of which, the works of Dr. Eichhorn particularly may be consulted.<sup>1</sup>

#### VACCINIA. COW-POX.

Vocab. Cow-pox, Grease, and Vaccine-pox.

470. On the teats of the cow, there occasionally occurs a particular kind of pustule, known in England under the name of cow-pox. The fluid of this pustule inoculated upon the skin of the human subject, gives rise to an eruption of similar pustules, to which the name of vaccine-pox, cow-pox, or vaccinia has been given. The disease thus communicated has the remarkable property of almost constantly preserving the constitution from the contagion of the small-pox, and always of notably diminishing the virulence of the variolous action, when it fails to give complete immunity from its influence.

471. The vaccine pustule appears three or four days after the inoculation of the virus; on the seventh and eighth days, it contains a viscid and transparent fluid, which is collected within a reticulated pseudo-membranous deposit. On the eighth, the pustule is surrounded by an elevated border, and an inflamed areola, and appears depressed in the centre. The contained fluid is at length changed into a brownish crust, which is detached towards the twenty-fifth day, leaving a puered and characteristic cicatrice on the skin.

472. *Inoculation of the vaccine pox.*—Vaccinia cannot in general be excited oftener than once in the same individual; it has, however, been communicated a second time.<sup>2</sup> It may also be produced in some rare cases in those who have had small-pox naturally, or by inoculation. In these individuals, however, a modified cow-pox or vaccinella is more commonly engendered. Cow-pox may be communicated to persons of all ages; but it seems to be more readily excited in children than in adults. Infants have been vaccinated a few hours after their birth; the operation, however, except under pressure of the epidemic prevalence of small-pox, may be deferred till the second or third month. It is seen, in fact, from the statistical tables of small-pox given by M. Mathieu, that this disease is infinitely rare from the period of birth to the age of six months. (a)

Certain seasons exercise an indubitable influence on the evolution of cow-pox; the heat of summer accelerates; intense cold retards its progress. Menstruation and pregnancy do not contra-indicate vaccination. (b)

(a) The proper time is about the third month after birth.

(b) Common ailments do not interpose an obstacle to vaccination,

<sup>1</sup> Eichhorn, op. cit. p. 407.

<sup>2</sup> Boffinet. Journ. compl. des sc. med., t. xxxi. p. 79.—M. Moreau, Professor of Midwifery, has given a case.—MM. Bricheteau and Boucher of Versailles, have seen several cases of these double vaccinia.—M. Trannoy assures us that he knew a lady who took cow-pox as often as she was vaccinated. On the other hand, M. Barry informs us, that he re-vaccinated above 300 individuals without producing a single pustule.

Healthy individuals do not require any preparation before being vaccinated. Occasionally, however, it is well, in the case of adults and the aged to diminish the rigidity of the skin by the use of the warm bath and the application of a soft poultice to the part selected for the punctures, the night before inserting the vaccine virus. In weakly children, of a lax fibre, the skin should previously be rubbed briskly with a coarse towel. By using these and similar means, individuals have at length been successfully vaccinated on whom the operation had been fruitlessly attempted several times before.

474. Certain circumstances, such as the existence of an acute inflammation of any of the viscera, too great a flow of blood from punctures carried too deeply, and peculiar medical constitutions, may prevent the success of the operation.

In a small number of subjects, some inscrutable condition or idiosyncrasy occasionally prevents the development of cow-pox. Vaccination performed on infants of three or four days old, fails on an average two in three times; it succeeds, on the contrary, ninety-eight times in a hundred, after six weeks.

475. *Methods of performing vaccination.*—The fluid of the pock of the cow's teat, or of the vaccine pustule of the human subject, may be inoculated by means of a *blister*, an *incision*, and a *puncture*.

1. *Blisters* have the twofold inconvenience of exciting an irritation, which tends much rather to prevent the action than to favour the absorption of the virus, and of causing an inflammation which, in young infants, occasionally terminates in ulceration.

2. *Incisions* are frequently followed by cutaneous inflammation, not vaccineal in its nature. This, however, is the only mode available, when all the virus at our disposal is contained in threads which have been soaked in the fluid. A superficial cut is made in the skin, a line and a half or two lines in length, in such a way as to cause little or no bleeding, into which a piece of the thread charged with the virus, a line in length, is introduced. The wound is covered with a bit of sticking plaster, and the whole secured by a turn or two of a roller. After an interval of two or three days, the dressing may be removed, and if the process of infection appears to have begun, the bit of thread may be drawn out of the wound.

The method by *puncture* is less painful, and also more certain in its results than that by incision. Two or three punctures are usually made in each arm with the point of a common lancet, or better, of a lancet constructed for the purpose, charged with the vaccine virus. Jenner was in the habit of making only one puncture in each arm; Dr. Eichhorn makes from sixteen to twenty altogether. If the vaccination be performed from arm to arm, which is the preferable plan, the lymph ought to be taken from the pustules on the fourth day of their evolution.

476. The *usual method* of performing this trifling operation is as follows: after having taken up on the point of a lancet or needle, a little of the fluid, the vaccinator, with the left hand, grasps the posterior part of the arm of the subject about to be vaccinated. He then makes the portion of skin that intervenes between his thumb and fore-finger tense, and with the right hand pushes the point of his instrument in a horizontal or slanting position a short way into the substance of the integuments. The thumb of the left hand being now applied over the puncture, he allows the instrument to remain for an instant, and when withdrawing it, presses gently upon the blade, as if to wipe it within the wound.

477. *Dr. Eichhorn's method.*—He advises from sixteen to twenty punctures to be made—a number which he esteems adequate in almost every case to secure individuals against the contagion of small-pox. Twenty-four or forty-eight hours after the appearance of the red circle, which is developed around the pustules, Dr. Eichhorn, with the matter of the nascent vaccine-pustule, vaccinates the same individual a second time; performing what he entitles the *proof vaccination*, in which he makes from four to six punctures. Three events may now occur. 1. The proof vaccination does not

if there be any urgency for having the operation performed. But in no case, unless small-pox be in the house, or the child be unavoidably threatened with its contagion, should vaccination be practiced on a subject whose skin is affected with any eruption or running sores.



take; the punctures do not rise; and the individual is then completely safe from small-pox. 2. The proof vaccination takes; but very small pustules only are developed, although possessing the form and structure of the true ones; the red circle is formed at the same time as that of the pustules already existing, and the whole dry off together; the individuals in whom this occurs are not secure. 3. The proof vaccination succeeds, and fresh pustules are evolved with so much regularity, and with the same slowness as the first; in the majority of these cases, the individuals are not protected.

These statements and experiments of Dr. Eichhorn deserve to be further inquired into and repeated.

478. If no other vaccine virus can be procured but that which is preserved between two plates of glass, or upon a piece of linen-rag, it must be softened or mixed with the smallest possible quantity of cold water, and then employed in the ordinary way by puncture.

To use the vaccine virus preserved in glass tubes,<sup>1</sup> the two extremities must be broken off, when by blowing gently into the tube, the matter it contains can be collected on a plate of glass and inserted by a puncture, as is done from arm to arm.

479. The vaccine pustule possesses its full energy on the fourth day of its appearance, and its contents present the following characters: 1. When several small punctures are made with the point of a lancet in the surface of a vaccine pustule, the contained fluid exudes slowly under the form of globules of a silvery colour. 2. When copiously shed over the surface of the areola this fluid resembles the slime left by a snail in its track. 3. It is viscid and mixed with difficulty with blood; it may be drawn out into threads between the thumb and finger; it sticks readily to the surface of a lancet or plate of glass applied to it; it dries quickly in the air, forming on the point of an instrument a gummy-looking crust. Threads imbibed with it become stiff when dry, and if they are then bent, it flies off in scales of a vitreous aspect and considerable hardness.

480. The whole of the fluid of a vaccine pustule does not appear to possess the same activity. Thus when a very large number of children are vaccinated from one or two pustules only, the first operated on have a better chance of infection than the last.

The vaccine virus possesses its full activity from the moment of its deposition within a pustule, and its power continues, although not in the same degree, till the eighth or ninth day of the vaccination. In general it is so much the more energetic as it is taken nearer to the period of its formation; the smaller the quantity of virus a properly developed pustule contains, also, the more energetic does it appear to be.

The virus of the vaccine pustules of young children is more certain in its effects than that taken from those of adults.

M. Bousquet assures us that the vaccine virus becomes rapidly deteriorated when preserved in tubes. It suffers less change when kept dry, between two plates of glass.

The scab of a vaccine pustule will occasionally transmit the disease; it is very uncertain however. (a)

Chemical analysis has showed the vaccine fluid to be composed of water and albumen; it has taught us nothing in regard to its peculiar contagion. (b)

481. *Symptoms.*—At the time each puncture is made, there is almost always formed around the point a superficial slight red circle

(a) In the United States, the scab or dried crust is almost the sole material used for propagating vaccine disease by vaccination. Although we might prefer, on the score of greater certainty of success, the fresh lymph, yet this cannot be procured in common, or more than once from one person, without injustice to the latter, owing to the irritation and inflammation which may follow and modify injuriously the progress of the vaccine pustule to entire maturation.

(b) M. Donné assures us that the microscope has not, as yet, revealed any distinctive character of vaccine vesicles or scabs.

<sup>1</sup> These tubes are six lines in length and capillary at their ends. To charge them with vaccine virus, nothing more is necessary than to touch the little globules of fluid, which flows from a puncture of the vaccine pustule, with the smaller extremity of the tubes. When sufficiently charged they are hermetically sealed in the flame of a candle. The virus thus collected is said to preserve its properties unimpaired for several years, if it is not exposed to too great a degree either of heat or cold. The tubes can be packed in the barrel of a quill, with a little bran, and sent anywhere.

from six to twelve lines in diameter, which disappears within a few minutes. This primary phenomenon is by no means a criterion of the future success of the operation as has been imagined; it follows punctures of every description. When the blush has disappeared, the puncture rises in the form of a small half lentil, looks slightly red, and continues longer than the first efflorescence; but it also subsides and vanishes in the course of a few minutes. Till the third and fourth days the vaccinated part presents no appearance of change (the period of incubation). At the end of the third day, or during the course of the fourth day, the evolution of the vaccine pustule commences: the finger readily detects a slight degree of hardness in the points where the punctures were made; upon these a small red elevation is not long of showing itself. On the fifth day this elevation becomes circular, and assumes an *umbilicated* appearance. The part is somewhat itchy. On the 6th day the red tint of each elevation becomes brighter, the circumference, which is surrounded by a red circle half a line in breadth, enlarges, and the centre of the pustule is more depressed. On the 7th day the size of the pustule increases; it spreads in its circumference and acquires a silvery aspect; the red colour which tinged it is lost in the central depression, and continues to occupy a very small part only of the outer margin. The red and very narrow circle, which up to this time has circumscribed the pustule, fades somewhat from the intensity of its colour; the inflammation extends to the subcutaneous cellular substance. On the ninth day the circumference of the pustule is still larger, its surface is more raised, and appears more turgid with the matter than ever; the red circle, the irradiations of which extended in streaks before, now acquires a more uniform rosy hue, and a perfect areola is formed. On the tenth day the turgid circumference of the pustule continues to spread, the areola acquires a diameter of from one to two lines, and the part of the skin upon which it is developed occasionally becomes indurated and very much swelled (the *vaccine tumour*). Its surface appears granular and slightly dotted, and by means of the magnifier a great number of minute vesicles filled with transparent fluid may be distinguished upon it. The person vaccinated experiences a biting heat and violent pruritus in the part affected, and a sense of weight and pain, which occasionally extends to the axillary glands, in the whole of the arm. This inflammatory period is often accompanied by some degree of fever and restlessness, with acceleration of pulse, &c., &c. On the eleventh day every thing continues in the same state as on the tenth. The vaccine pustule at this period is elevated from one to two lines above the level of the skin, and resembles a large lentil, the edges of which are raised in a pique. It is of a pearly hue, and its diameter varies from two to five lines; it feels hard to the touch, and resists pressure like a body intimately connected with the skin. During the whole of this period the vaccine fluid is contained within a reticulated pseudo-membrane, very nearly in the same manner as the vitreous humour of the eye is entangled in the cellular web. On the twelfth day the pustule begins to dry; the central depression assumes the appearance of a scab; the fluid, contained within the circular puffed circumference, limpid hitherto, now grows turbid and opalescent. The areola becomes pale, the general swelling subsides, and the cuticle covering it begins to scale. On the thirteenth day the desiccation advances in the centre; the pustule which has been cellular hitherto, now consists of but a single cavity. If it be punctured, its whole contents, consisting of a turbid yellow purulent matter, are evacuated. The areola changes into a circle of a pale purplish hue. On the fourteenth day the scab acquires the hardness of horn, and a tawny yellow colour something like that of barley-sugar. The circle which surrounds it decreases in breadth at the same pace as the vaccine tumour or general swelling subsides. From the fourteenth to the twenty-fifth day, the solid yellow crust becomes of a deeper colour, approaching mahogany in its appearance, and almost always preserves its umbilicated form. In proportion as the general swelling subsides, the scab seems to rise more and more above the level of the skin; it finally falls off between the twenty-fourth and twenty-seventh day, leaving exposed a deep cicatrix, studded with minute depressed points, similar to those which are often seen on the thin biscuits called wafers. (a)

(a) The vaccine pustule runs a given course of varus and of



482. Vaccinia is not always developed thus completely and thus regularly. 1. Occasionally but one or two pustules follow a much larger number of punctures. In the opinion of the majority of vaccinators, one pustule protects the constitution as effectually as six or a dozen (Messrs. Eichhorn and Robert, however, are of a different opinion). 2. The period of incubation may be prolonged to the twenty-second or twenty-fifth day, and even much longer,<sup>1</sup> or it may not extend to more than two or three days. 3. Irregular pustules occasionally arise from the accidental conjunction of two pustules evolved in the immediate vicinity of each other. 4. The vaccine virus occasionally produces in the same individual the true, and the modified cow-pox or *vaccinella*. 5. Vaccine pustules may appear on parts of the body where no inoculation was performed. It is almost always on inflamed surfaces which have lost their epidermis that these secondary pustules are developed, such as parts affected with chronic and impetiginous eczema, excoriated lichen, &c. These pustules, indeed, are occasionally produced by the accidental inoculation of the vaccine matter carried on the fingers in scratching from the original pustule to the abraded surfaces, when the constitution happens to have been but imperfectly modified by the first eruption. More commonly, however, the supernumerary pustules are the result of a secondary eruption analogous to that which even so uniformly occurs after the inoculation of the virus of small-pox. 6. In the negro and mulatto the inflammatory areola of the vaccine pustule is not very apparent, the skin, in its usual situation in the white, presenting in them merely a coppery appearance. In them, too, the cicatrix is red. Lastly, there occur *vaccinia sine vaccinis*. A well-constituted child, on the eighth day after vaccination complained of general uneasiness, and exhibited febrile symptoms which continued for a week. The eruption was looked for in vain. M. Pistono re-vaccinated the child, but without effect.<sup>2</sup> M. Petiet having vaccinated an individual who had had the operation fruitlessly performed the year before, this person, after an interval of eight days, was seized with fever which continued for thirty-six hours; vaccination performed at three different times

vesicle, which at length terminates in a concretion, and forms a crust. The stage of varus, or the papular, lasts but one day; the vesicular consists of four days *umbilicated*, and three *acuminated* and pustular: the process of incrustation is also three days more; so that allowing three days for incubation, the whole duration of the disease, from the time of puncture until the formation of the crust, is from fourteen to seventeen days; but some days elapse after this before the crust or scab falls off. The eighth day is the period of the first blush of the areola; this enlarges on the three following days, or those of pustulation, which is also the period of slight fever.

Anatomically considered, the vaccine pustule has its seat in the muciform tissue of the cutis, and is a little more superficial than the small-pox pustule, which has its seat in the thickness of the dermis. At its origin, it is only a small tubercle, more or less hard, but when most perfectly organized, bisect, either horizontally or perpendicularly, a pustule, and it will be seen divided into a number of cells, separated from each other by a thin cellular tissue, each filled with a clear diaphanous liquid, which is the vaccine virus. The cells do not communicate together, but radiate from the circumference to the centre, where they unite in a common bride, which depresses the cuticle and gives the umbilicated character to the pustule. This is the state of the parts from the sixth to the ninth day—but it does not last, the lymph becoming altered and turbid, and pus mingles with the virus, the bride is broken, and the pustule ruptures. There are many anomalies in the form and character of the pustule. This latter we should regard as an external sign of a constitutional disease, but not necessary to it.

The vaccine cicatrix is round, deep, puckered, radiated, and studded with points, which answer, without doubt, to the cells into which the interior of the pustule is divided. It is more marked in proportion as it is more recent; but it is never entirely effaced by time. The cicatrix is not to be received as an infallible criterion of the actual amount of constitutional protection, although, in the existing state of our knowledge, it is the best.

<sup>1</sup> Baker.—Obs. sur un bouton vaccin développé six mois après l'insertion du Virus. Arch. gén. de méd., t. 1. p. 277.

<sup>2</sup> Rapport du comité de vaccine, 1812.

subsequently produced neither eruption nor fever; inoculation of small-pox was also performed in vain. M. Bousquet gives several analogous facts, which must be distinguished from the simple febrile paroxysms produced by the punctures.<sup>3</sup> In cow-pox as in small-pox, the *general infection* is the essential matter; the eruption is merely secondary.

483. Cow-pox is a very mild disease; but it may accidentally be complicated with other affections. When the pustules are extremely numerous, inflammation of the axillary glands, eczema, accidental pustules, roseola, erysipelas, phlegmon, and inflammation of the lining membrane of the bowels, are the diseases that most frequently complicate cow-pox in children.

The direct inoculation of cow-pox has also been known to occasion the same complications in adults.

Of all possible complications, however, that of small-pox with cow-pox is the one which is fraught with the highest interest.<sup>4</sup> These eruptions most commonly modify each other when the two contagions exert their influence at the same time.<sup>5</sup> Yet it would appear that, under certain circumstances, the variolous contagion is not modified in its effects. (§ 500.) Thus at Marseilles, during the month of June, 1828, nine persons died of small-pox during the development of cow-pox, and three others had, previously to the above date, died under the same circumstances; in the month of August two more died, and in September two more, in all sixteen individuals, who became the victims of small-pox, in spite of cow-pox, which accompanied it.

When a mixture of the variolous and vaccine virus is inoculated, two different eruptions are occasionally developed perfectly in accordance with the twofold and dissimilar nature of their exciting cause. Woodville was the first who made this experiment, which has been repeated by Messrs. Salmade and Bousquet.<sup>6</sup> In opposition to the opinion of the latter, I conceive that the action of the variolous virus was modified in his experiment, and that the eruption which *left no cicatrices* was rather the umbilicated pustular varicella than legitimate variola.

484. Professor Monteggia,<sup>7</sup> in a paper read on the 17th of February, 1814, before the Institute of Milan, maintained that if a syphilitic child were vaccinated, a pustule was developed which contained the two poisons. In 1821, M. G. Cerioli again advanced the same opinion: "Catterina Selibino, two months and a half old, healthy to all appearance, was vaccinated. The vaccine pustule became perfectly well developed; on the 16th of June, 1814, ten children were vaccinated with the lymph from her arm, and with the virus from these ten, thirty other children were inoculated. Within a few months Catterina Selibino and five of the first vaccinated children died. Of the thirty vaccinated in the second instance, only seven could be traced. Of these, one was seized with a peculiar disease which he communicated to his brothers, and another also exhibited morbid symptoms. The parents of Catterina had long laboured under a syphilitic complaint which they neglected. A few days after the vaccination, the child became covered with pustules, which appeared upon the external parts of generation, about the anus, on the neck, forehead, and around the mouth. The other children vaccinated were attacked with similar pustules, ulcerations of the mouth, and morbid growths about the arms; the disease was also communicated to several nurses, who suckled these infants, and to different other children who were nursed along with them."

485. *Diagnosis*.—Cow-pox is not liable to be confounded with the accidental pustules which have very improperly been designated *false cow-pox*, and which are produced every time that pus or another stimulating fluid is inoculated. Such pustules are evolved on the morrow, or the day after that, on which the operation was performed; they are circular in their shape, and rise into a point from the period of their evolution; their summits are yellowish, and they are so fragile

<sup>3</sup> Fauchier. Obs. sur la vaccine sans éruption. (Rec. périod. de la soc. de méd. de Paris, t. xxi. p. 281.)

<sup>4</sup> Sédillo (J.). Observat. de petites-véroles malignes survenues pendant le développement de la vaccine (Rec. périod. de la soc. de méd. de Paris, t. xxviii. p. 3). —Duplan. Observat. sur la petite-vérole survenue pendant le cours de la vaccine, et sur la marche simultanée de ces deux éruptions (Ibid., tom. xxviii. p. 126). —Bouteille (C. M.). Tableau de vaccine et de la petite-vérole, en concurrence sur le même individu. (Ibid., t. xxiv. p. 393.)

<sup>5</sup> Petit. Journ. hebdom. 1re série, t. viii. p. 302.

<sup>6</sup> Bousquet. Op. cit. Rapport entre la variole et la vaccine, p. 328.

<sup>7</sup> Marcolini (F. M.). Sulle complicazioni della vaccina, 8vo. Milano, 1823.



that they give way under even the slightest pressure; the pus they contain escapes and dries up from the third to the fifth day. The scabs that succeed are yellow, soft, and often bathed in an ichorous fluid. In a word, these pustules have neither the course nor the umbilicated appearance characteristic of those of cow-pox.

*Vaccinella* or *spurious* cow-pox bears a greater resemblance to cow-pox, the disease being characterized by the presence of one or of several pustules, accurately circumscribed and umbilicated, which, like those of the true cow-pox, appear on the fourth day, advance like them, although with an inferior degree of attendant inflammation, to the eighth or ninth day, and usually dry up about the fourteenth or fifteenth day. The fluid they contain, if inoculated, is capable of producing the legitimate cow-pox (Eiehorn), as well as a pustule, which differs from true vaccinia, either in the greater rapidity of its progress, after it has attained the period of suppuration, by being accompanied with a less degree of inflammation either of its circumference or of its areola, and by being followed by a mere mark or very slight scar instead of the pinked and puckered cicatrice characteristic of true vaccinia; lastly, the pustules of *vaccinella* do not so certainly preserve from variola as those of cow-pox.

In the various particulars of their form and progress the pustules of cow-pox have the greatest similarity to those of inoculated small-pox. Like these they are evolved several days after the insertion of a peculiar virus; like them they are of a circular shape, pitted in the centre, and pass through their periods in the course of about three weeks; but they differ in the circumstance of their contagion not being transmitted like that of small-pox by the medium of the atmosphere. The eruption of variola is also essentially of a general nature, whilst that of vaccinia, with the exception of a very small number of cases, is purely local. Despite their common features, however, these two diseases seem to be even mutually opposed; their simultaneous inoculation very commonly induces modifications in their outward appearances and in their progress. It has been said, indeed, that the virus of small-pox inoculated upon the common heifer produces cow-pox; but the experiment has been repeated without such a result.<sup>1</sup> Dr. Sunderland<sup>2</sup> has also been said to have succeeded not only in giving small-pox to a heifer by clothing it with the coverlid of a variolous patient's bed, but in successfully using the matter of the eruption thus produced for engendering cow-pox in the human subject; Dr. Numan, however, on repeating this experiment, did not obtain the same results.

The researches of M. Guillon have demonstrated the analogy of the umbilicated pustular varicella when produced by inoculations, to cow-pox.

Vaccinia being the product of the virus of cow-pox transplanted upon the human subject, it can be no matter of astonishment that the two eruptions in man and the animal should resemble each other, nor that the virus of the vaccinia of man inoculated upon the teat of the cow, should there occasionally produce cow-pox.

The matter of the small pustules of the *grease* of the horse, inoculated upon man, or the cow, has been said to cause the development of vaccinia or cow-pox,<sup>3</sup> but the experiment was repeated by Woodville, Simmons, and Buniva without any such consequences. Several of the cases of *grease* which have been shown to me by well-informed veterinary practitioners, belonged evidently to eczema impetiginodes, or to impetigo. (a)

(a) I cannot better present the subject of the probable origin of cow-pox and of its connection with small-pox, than by repeating the brief summary which I have recently made in another work.

"The original source of vaccine virus was believed by Jenner to be in the heel of the horse when this animal is affected with the disorder called grease. Experiment and analogy are, however, opposed to this view. Another hypothesis of Jenner has been revised of late years, and apparently its reality confirmed by experiment. He expressed 'his unalterable conviction that how different soever they might be in some particulars, the cow-pox and the small-pox were in reality identical;' that the cow-pox was not 'an antidote but the

486. *Prognosis*.—Vaccinia attains the height of its preservative power on the second day of its appearance.

M. Bousquet has shown that the integrity of the pustules was not required to give vaccinia its preservative virtues; he opened and cauterized the pustules from the moment of their appearance, and vaccination performed anew was without effect.

Not only is cow-pox generally a complaint of extreme mildness, but in certain circumstances it may even prove a kind of *salutary disease*. Like several other forms of external inflammation, it has occasionally brought about or hastened the cure of ophthalmia, otitis, chronic bronchitis, and whooping-cough; further, its virus inserted into various chronic inflammatory affections of the skin, may accelerate the progress of these affections.

substitution of a mild species of small-pox instead of a malignant sort, or of cow small-pox for human small-pox.' Trials were made to test this hypothesis; but although many cows have been clothed with blankets taken from the bed on which small-pox patients had just died, and have been inoculated in every possible way, yet, not only has this small-pox not been satisfactorily produced, but this failure of such experiments rendered it probable that the cow was unsusceptible of the disease.

"Of late years the question has assumed a new aspect since the success of Mr. Ceely's trials, by inoculating the cow with variolous virus, and procuring from the pustules matter which, introduced into the skin of the hitherto unprotected human subject, gave rise to distinct vaccinia and allowed of successive transfers to other subjects, with the preservation of all the regular features and other phenomena of the cow-pox. Mr. Fare, in his letter to the Registrar-General of England, in the annual report for 1842, adopts, as a received truth, these results, when he says, *varioline*, or the specific matter of small-pox, is converted into vaccine. It had been asserted in 1828 by Dr. McMichael, in an essay read before the College of Physicians, that 'vaccine matters having failed in Egypt, medical gentlemen were led to institute certain experiments by which it has been discovered that, by inoculating the cow with small-pox from the human body, fine active vaccine virus is produced.' Connected with this question are the interesting facts on record, of the prevalence, at the same period, of the cow-pox among cattle and the small-pox among men, and the transmission by contagion of the small-pox to cattle, and the consequent development of cow-pox in these animals.

"If we are to speak of the habits of the *vaccinæ* or vaccine poison as seen in the cow, we learn that the disease is occasionally epizootic or prevalent, at the same time, at several farms at no great distance from each other, but that more commonly it is sporadic, or nearly solitary. So irregular is its appearance, that Mr. Ceely (*On Variolæ Vaccinæ*), states that he has known it to occur twice in five years, in two contiguous farms in Buckinghamshire; while at a third adjoining dairy it had not been known to exist for forty years. It is said to appear most commonly about the beginning or end of spring, rarely during the height of summer, but has been seen at any period from August till May, or the beginning of June. One other remarkable circumstance, however, connected with the disease in the case, is that it is peculiar to some countries, and to certain districts of the same country. On the first publication of Dr. Jenner's discovery it was much sought for in England, but found to exist only in eighteen counties. It has been found, also, among the cattle of Lombardy, Holstein, Persia, the southern parts of America, and in India. It is singular, however, continues Dr. Williams, whose narrative I am now following, that it was altogether unknown in France till 1836, when, by an inexplicable *bizarrie*, it was discovered in three separate districts, at a short distance from each other, or at Passy, near Paris, Amiens, and at Rambouillet. This latter fact is strong argument against the disease being small-pox, and of the cow being affected by the human subject, for on such an hypothesis it is impossible to assign any reason why the disease should be so often communicated in England and so seldom in France. The poison is capable, also, of producing the cow-pox in many animals, not naturally liable to it by vaccination, as the dog, the goat, the she-ass, the sheep, and, perhaps, the horse." *Bell and Stokes's Lectures on the Practice of Physic*, 3d edit., p. 735, vol. ii.

<sup>1</sup> Voisin. Mem. sur la vaccine, 8vo. 18.

<sup>2</sup> Arch. gén. de méd., Nov. 1831.

<sup>3</sup> Loy. Acci. of some experiments on the origin of cow-pox, 8vo. London, 1820.



The detractors from the merits of vaccine inoculation on the other hand, have said, but without proving their assertions, that phthisis, rickets, scrofula, nervous fever, &c., have become much more frequent in Europe since this eruption has been made to replace that of small-pox.

487. *Treatment*.—Cow-pox, uncomplicated with any other co-existent affection, requires no treatment; it ought to be left to itself, in order that it may run through its natural periods unimpeded. The pustules should be preserved from all rubbing and compression which might injure them before the period at which the virus they contain may be collected for other vaccinations. The custom of giving an aperient after the fall of the scabs, so generally insisted on by mothers and nurses, is seldom necessary.

488. Should roseola, (§ 269,) a large phlegmon, extensive erysipelas, acute inflammation of the axillary glands, &c., complicate vaccination, these various affections must be subdued by blood-letting, low diet, and the other measures usually adopted in their treatment. Should the development of too large a number of pustules appear to occasion unpleasant symptoms, one or more of the points may be touched with caustic, and their progress thus arrested without the protecting influence of the others being injured by the practice.

489. It has been said that the vaccine virus has *degenerated*, and that of late years the eruption has not been so vigorous as it was of old; that the vaccine fever is less marked, and the cicatrices not so definite; that the disease can no longer be transmitted back to the cow; that small-pox occurs more frequent after vaccination now than formerly, and that we also succeed more readily in giving cow-pox twice to the same individual. In the expectation of finding a remedy for this presumed degeneracy of the vaccine virus, it has been proposed to recur to the matter of cow-pox developed spontaneously in the animal, or to the virus tempered anew in its source by being transferred from man to the cow.<sup>1</sup> (a)

490. These fears, however, appear exaggerated at least. It is certain that we every day meet with vaccine pustules which resemble in every particular those, the description of which have been transmitted to us by the earliest vaccinators, several of whom, and Marshall in particular, inform us that persons vaccinated, may go about their ordinary business. The assertion in regard to the cicatrices is entirely gratuitous. It has at all times been found a difficult matter to inoculate the cow with the vaccine virus. The occurrence of small-pox after vaccination appears more frequent at the present day only because

(a) Means of comparison in this respect, within the last four or five years, have been furnished to the profession in England, and measurably to some physicians in the United States, chiefly through the labours of Mr. Estlin, of Bristol; but as yet the question is not clearly settled. The few trials made by myself do not incline me to give a preference to the vaccine virus recently procured from the cow; or to *retro-vaccination*, as it is called. We have no evidence of its greater protecting power, although generally the inflammation is greater and the areola larger than in vaccinia induced by the older transmitted matter. Upon the whole, however, we are justified,—and, considering the possible causes of deterioration of the vaccine matter in its transmission through a great succession of persons, perhaps we should add, authorized—to recur to the primary lymph from the cow.

The following curious fact, if it be a fact, is worth mentioning in this place. I find it in a note at p. 116 of Mr. Wilson's book.—*Am. edition.*

"Dr. Lichtenstein, in a paper, entitled 'on the sources from which matter preservative against the small-pox has been derived,' in Hufeland's Journal for 1841, remarks, that limpid lymph taken from the pustules produced by tartarized antimony, and inoculated in a person who has not been vaccinated, produces vesicles, which cannot be distinguished from those of vaccinia. These vesicles appear to be equally protective against small-pox with the cow-pox, and the matter may be transmitted from person to person in the same manner. The author has inoculated and re-inoculated thirty-one persons with the matter procured from this source; and these persons were protected during an epidemic of small-pox, although placed in association with patients affected with that disease."

<sup>1</sup> Fiard. Nécessité de régénérer la vaccine (Rev. Méd., 2de série, t. ii. p. 323.)

the fact is no longer disputed, and perhaps because variolous medical constitutions have been more than usually prevalent of late. Lastly, the possibility of communicating cow-pox a second time, twenty years after its first inoculation, so far from proving that the vaccine virus at our disposal in the present day is less energetic than it used to be, tends rather to demonstrate the reverse of the proposition. Nothing, then, shows that *cow-pox has degenerated*.

491. In the event of a variolous epidemic, it is well to vaccinate anew all who may have had the operation already performed, but who possess no certificate or assurance of their having previously passed regularly through the different stages of cow-pox.

Several practitioners having thought they perceived that those among the vaccinated who had had the operation performed most remotely, were more subject to attacks of variolous eruption than the rest, have proposed to re-vaccinate the same individual at intervals of a year, two years, seven years, &c. For my own part, I conceive that vaccination ought to be attempted as often as a variolous epidemic prevails, or at least on occasion of the first epidemic of this kind that follows the vaccination, when the operation has not been performed in the way proposed by Eichhorn. (a)

(a) Overweening confidence, as I have elsewhere remarked, in the all-protecting power of vaccination against small-pox was followed by undue mistrust of its efficacy. Physicians had too generally forgotten, that Jenner himself, and some of his zealous cotemporaries engaged in the same philanthropic task with him, had clearly pointed out the fact of small-pox supervening after vaccination had been duly performed. The reason assigned then was the shortness of time that had elapsed between the vaccination and the exposure to variolous contagion. Since, and now, the reason set forth is the length of time, by which the vaccine impression on the system is worn out. Both of these two opposite and contradictory reasons cannot be true—the probability is, that neither rests on a stable foundation.

"In the two papers which I wrote exhibiting the joint experience of Dr. J. K. Mitchell and myself, we concluded with the following inferences, the accuracy of which has been tested by succeeding observations in different parts of Europe, and of this country. The first inference was, that the disease which prevailed in Philadelphia, in 1823–4, and which we had been called upon to treat in so large a number of cases, was the real small-pox.

"2. That this disease, distressing to the persons labouring under it, and disgusting to those in attendance, is usually violent, never without danger, and always in large proportion, under any known treatment, is of fatal termination.

"3. That the unsusceptibility of persons who have once had the small-pox to a second attack, though of general notoriety and truth, is not universal, and that with us, as elsewhere, persons, thus apparently protected, were seized with the disease, of which some of them died.

"4. That inoculation of small-pox, though in general conferring on the person subjected to this process immunity from the effects of variolous contagion in after life, does not necessarily or infallibly guarantee him against the disease, nor prevent death when it has made its invasion.

"5. That vaccination cannot now, any more than on its first introduction, be received as a certain preventive against the effects of the variolous poison, though now, as formerly, it must be considered as the best and safest with which we are acquainted.

"6. That occasionally under all circumstances of exposure, but more especially during the epidemic prevalence of small-pox, its contagion will effect both the inoculated and the vaccinated, and produce in them a fever and eruption, differing in no essential feature from the primary variolous disease, except in the general mildness and speedier subsidence of the cutaneous disorder, and the more common exemption from secondary fever.

"7. That, of the inoculated and the vaccinated exposed to the variolous poison, the former will more probably escape its influence than the latter; but if both be affected by this contagion, the chances of recovery are in favour of the vaccinated.

"8. That the protecting power of the vaccine virus on persons who have been duly subject to its influence, is not diminished nor



492. Since Jenner made his discovery, variolous epidemics have desolated various quarters of Europe, and the vaccinated themselves have not escaped their ravages. Dr. Eichhorn has made a particular study of these epidemics, and has deduced the following conclusions from their different histories: 1. The vaccinated may have *legitimate* as well as *modified* small-pox, and they generally suffer more severely in proportion as the number of vaccine pustules has been smaller. 2. Among all who have been vaccinated up to the present time, not more than the half have been protected from all attack, slight or severe, of small-pox. 3. The ratio of *modified* (varioid) to *true* small-pox after vaccination, is very various; it is milder or more serious in proportion as a greater or a smaller number of vaccine punctures have been made.

The vast importance here attached to the number of vaccine pustules engendered, is a point that has been disputed; I have seen individuals labouring under *modified* small-pox whose arms were marked with four or five vaccine cicatrices, but my observations are not sufficiently extensive to warrant me in drawing any general conclusions in opposition to those of Dr. Eichhorn.

destroyed by the length of time from its first introduction into the bodies of such persons; and that no proportion whatever exists between its efficacy and the recency or remoteness of the epoch, when the constitution was placed under the influence of the virus.

"9. That there is no reason for believing in the deterioration or alteration of the vaccine virus, which is used at this time, from that which was in use during the first years of the practice of vaccination.

"The data on which we based the above conclusions were observations of 248 cases of natural and modified small-pox, of which 176 were visited at the hospital. Of these there were—

Unprotected.	Vaccinated.	Inoculated.	Prev. Small-Pox.	Unk.
155	64	9	7	13
Deaths 85	1	3	3	—

In regard to colour the proportion was—

Whites, total.	Whites unprotected.	Col. persons total.	Id. unprotect.
111	60	122	91
Deaths	31		54

"It is pleasant to find, after a period of enlarged experience of fifteen years, these opinions of ours so fully sustained by the conclusions of the French Commission of Vaccine, made in 1839.

"1. That the simultaneous vaccination of the mass instantly arrests the progress of the variolous epidemic.

"2. That if vaccinia be not an absolute and infallible preservative against variola, it is at least the most certain, and the most exempt from danger.

"3. That varioid, in the majority of cases, is the only inconvenience to which the vaccinated are exposed.

"4. That there seems no reason for the belief that the long vaccinated are not as surely preserved at the present day as they have hitherto been; or that the recently vaccinated have received less security than those who preceded them.

"5. That the complete success of re-vaccination affords no proof that the individual had ceased to be protected by vaccination, and that he had again become susceptible of variola.

"6. That a second vaccination does not appear to possess the power, any more than the first, of protecting all persons indiscriminately from the risk of a future attack of variola.

"7. That government ought not to command a general re-vaccination.

"8. That the total extinction of variola is to be effected by the universal adoption of vaccination.

"I am well aware, that of late years re-vaccination has been practiced on a large scale on the soldiers in the armies of Prussia and Wirtemberg, as well as on the people, and with such results as would seem to weaken a belief in the continued protecting power through life of the first vaccination—but other and different testimony leave us nearly free to retain our first belief, with the explanations already offered."—*Bell and Stokes's Lectures on the Practice of Physic*, 3d edit., p. 737, vol. ii.

### Historical Notices and particular Cases.

493. Jenner published his "*Inquiry into the causes and effects of variola vaccina*," in 1798,<sup>1</sup> and his admirable discovery spread rapidly over the whole of Europe. Mr. W. Bruce,<sup>2</sup> Consul at Bushire, in a letter dated March, 1813, tells us that the preservative powers of the vaccine pustule were perfectly well known among the nomadic tribe of the Eliaats.

Cow-pox has been the subject of very numerous inquiries (vide Appendix, art. cow-pox). Jenner himself imagined that it arose from the grease of the horse; an opinion which has been successfully combated by Pearson, Simmons,<sup>3</sup> and Buniva.

Besides the excellent treatises of Messrs. Husson,<sup>4</sup> Sacco,<sup>5</sup> and Bousquet,<sup>6</sup> the reader ought to consult the several essays and observations which have appeared on the *identity* of small-pox and cow-pox,<sup>7</sup> on the *period at which cow-pox becomes preservative*,<sup>8</sup> on the *multiplicity* of the pustules of cow-pox,<sup>9</sup> on the *fever of incubation* of cow-pox,<sup>10</sup> on the *influence of cow-pox appearing to extend from the mother to the fetus* during pregnancy,<sup>11</sup> on the *ANOMALIES* presented by cow-pox,<sup>12</sup> on its *complications*,<sup>13</sup> on the *attempts to inoculate with small-pox, individuals already vaccinated*,<sup>14</sup> and on the *reciprocal influence* of small-pox and of cow-pox.<sup>15</sup>

The remarks which have been published on modified small-pox, (§ 503,) on the salutary influence of vaccine-pox in *whooping-cough*,<sup>16</sup> on *quartan ague*,<sup>17</sup> on *ophthalmia*,<sup>18</sup> on *gout*, &c.,<sup>19</sup> all deserve to be consulted as well as those that have been made, on its influence on the ratio of mortality,<sup>20</sup> on *repeated vaccination*,<sup>21</sup> on the development of legitimate vaccine-pox in individuals who have had small-pox, &c.<sup>22</sup>

Lastly, several interesting experiments have shown that the vaccine infection could not be prevented by applying cupping glasses,<sup>23</sup> aqua ammoniæ,<sup>24</sup> or lotions containing solutions of the chlorates to the punctures immediately after the insertion of the virus. Different plans of collecting the vaccine virus have been proposed,<sup>25</sup> and various attempts have been made to infect the cow and other animals with the disease, by inoculating them with the virus of vaccinia<sup>26</sup> and of small-pox.<sup>27</sup>

CASE LXXII.—*Vaccinia in an individual already vaccinated, and bearing on his arms several characteristic cicatrices*. On the 30th of

<sup>1</sup> London, in 4to.

<sup>2</sup> Extract of a letter to W. Erskine, Esq., Bombay, from the Trans. of the society of Bombay, translated into the Ann. de Chimie et de Physique, 1819, t. x. p. 330. See also the inquiries of Moreau de Jonnés, on the state of knowledge among the Indians and Chinese, relative to cow-pox. (Arch. gén. de méd., t. xiii. p. 126.)

<sup>3</sup> Simmons (W.). Reflections on the propriety of performing the Cæsarian operation, &c., to which are added experiments on the supposed origin of the cow-pox. 8vo. London, 1799.

<sup>4</sup> Husson. Recherches historiques et médicales sur la vaccine, 8vo., première édition. Paris, 1803.

<sup>5</sup> Sacco. Trattato di vaccinazione, con osservazioni sul giavardo e vajuolo pecorino, 4to., Fig. Milano, 1809.

<sup>6</sup> Bousquet. Traité de la vaccine, 8vo. Paris, 1832.

<sup>7</sup> Desportes. Journ. hebdomad., 2d série, t. viii. p. 217.—Eusébe Desalle. Revue médic., t. viii. p. 252.—Elliotson. Lond. Med. Gazette, t. xi. p. 305.

<sup>8</sup> Bousquet. Bull. des sc. médic. de Férussac, t. xxiii. p. 150.—Revue médic., Septembre, 1830, p. 463.

<sup>9</sup> Frischler. Gazette médic., 4to. 1832, p. 142.

<sup>10</sup> Eichhorn. Bull. des sc. médic. de Férussac, t. x. p. 337.

<sup>11</sup> Gillard. Revue médic., t. i. p. 153. 1824.

<sup>12</sup> Genouville. Recueil périod. de la soc. de méd., 2de série, t. iii. p. 332.

<sup>13</sup> Morcolini (F. M.). Sulle complicazioni della vaccina. Milano, 8vo. 1823.

<sup>14</sup> Consultez les premiers rapports du comité de vaccine.—Legallois. Revue médic., t. viii. p. 252.

<sup>15</sup> Gazette Médic. Paris, 4to., 1832, p. 847.—Lisfranc. Note sur plusieurs cas de coïncidence de variole et de vaccine. Diss. inaug. Paris, 1813.

<sup>16</sup> Lond. Med. Gazette, t. viii. p. 40.

<sup>17</sup> Ermisch. Revue médic., t. i. p. 715. 1824.

<sup>18</sup> Coxe. Archiv. génér. de méd., t. xvii. p. 443.

<sup>19</sup> Casper. Revue médic., t. iv. 1824, p. 288.

<sup>20</sup> Wolfers. Revue médic., t. x. p. 155. 1826.—Dornblat. Bull. des sc. méd., de Férussac, t. xi. p. 261.

<sup>21</sup> Cavin. Revue médic., t. viii. 1825, p. 171.

<sup>22</sup> Molas. Journ. compl. des sc. médic., t. vi. p. 377.

<sup>23</sup> Bousquet. Arch. génér. de méd., t. xvi. p. 641.

<sup>24</sup> Meuche. Lanc. franç., t. v. p. 397.

<sup>25</sup> Pouzelot. Journ. hebdomad., t. i. p. 341.

<sup>26</sup> Valentin (L.). Vaccinations pratiquées avec succès sur des animaux (ânesse, chèvre, chien, mouton), et transmission de la matière-vaccine de ces animaux à l'homme. (Rec. pér. de soc. de méd., t. xii. p. 177.)

<sup>27</sup> Expériences de Sunderland et de Numan. Bull. des sc. méd., t. xxv. p. 158.



October, M. Hamel vaccinated a lady, thirty-four years of age, who had never had the operation done before, and who did not remember having ever had the small-pox. Towards the end of the fourth day following, he found two red spots in the situation of his punctures, about a line in diameter, and depressed in their centre, which, continuing to advance, presented in regular succession the whole of the characters of regular vaccinia. A sister of this lady, twenty-two years of age, who had been vaccinated when two years old, was present at the vaccination, and although she bore two very distinct cicatrices upon the upper part of each arm in the situation where vaccination is usually performed, she desired that the operation might be done again. M. Hamel consequently made six punctures in either arm, from which he anticipated no effect. On the fourth day, however, he was surprised to find a single point (all the others had faded) on the right arm inflamed, and forming a spot about a line in diameter, depressed in the centre, and similar to those by which the success of vaccine inoculation is usually proclaimed. By the end of the seventh day the pustule was perfectly characteristic of vaccinia; its centre was depressed, its margin was raised and transparent, and it was surrounded by an inflamed areola of small extent. At the end of the eighth day the pustule was still more fully developed, and the inflamed areola broader. The parts in the neighbourhood of the pustule were itchy; the young lady complained of being indisposed; the glands of the axilla were slightly inflamed. On the ninth day M. Hamel related the case to me, and on the tenth day I had an opportunity of seeing it along with him, when I found a perfectly regular vaccine pustule; the fluid it contained had by this time lost its transparency, and presented the peculiar appearance which announces approaching desiccation.

One of the cicatrices of the former vaccination was circular, depressed, and pinked (gauffrée) like the cicatrices which result from the most regular vaccine pustules. It was three lines in diameter. A second cicatrix on the right shoulder had also the same characters, but was different in shape, apparently from the fusion of two pustules into one. The young lady left Paris on the 19th day, the vaccine incrustation still adhering.

CASE LXXIII.—*Vaccinia in an individual successfully inoculated for small-pox thirty years before, and bearing on his person several characteristic cicatrices.* The Prince de \* \* \* \* had been inoculated in England in his infancy; the operation succeeded, and the eruption was held protective. Happening, in 1833, to be present when I was re-vaccinating another individual, the Prince proposed that I should make a few punctures on his arm with a lancet charged with vaccine virus. The operation was succeeded by the most regular cow-pox, a fact which was attested by several competent witnesses.

#### VACCINELLA OR MODIFICATIONS OF VACCINIA.

Vocab. *Vaccinellæ, Vaccinæ spuria, Spurious Cow-pox.*

494. Under this title I include several pustular inflammations of the skin, contagious in their nature, and similar to cow-pox in their appearance, which the inoculation of the vaccine virus or of the virus of *grease*, according to some accounts, occasionally produces in individuals who have previously had small-pox or vaccinia, or who only contract the latter malady imperfectly, either from want of sufficient energy in the vaccine virus, or from a kind of inaptitude to feel its effects; I also employ the same word to designate those modified vaccine eruptions which are thrown out after vaccination during the period of incubation or of the primary fever of small-pox, and to those which often proceed from the simultaneous inoculation of cow-pox and small-pox. These eruptions in fact are to vaccinia precisely what the varicellæ are to variola.

It is necessary to distinguish those eruptions, the matter of which possesses the power of reproducing vaccinia (Eichhorn), from certain accidental and non-contagious pustules which have also been described under the name of *spurious cow-pox*, and which seem to result either from the matter of cow-pox altered and deprived of its peculiar virulence, or from the inoculation of good vaccine matter upon constitutions which have become callous to its proper influence, in con-

sequence of a previous preservative variolous or vaccine infection. Several eruptions, transmitted to the human subject from the cow attacked with spurious cow-pox, or from the heel of the horse labouring under grease, might, perhaps, without impropriety, be also classed in this group.

495. 1st. *Vaccinella from the inoculation of individuals with vaccine virus who have already had vaccinia.*<sup>1</sup>—This variety has been observed by several practitioners who have re-vaccinated a large number of subjects. M. Bousquet says, that in one case which he met with, this second cow-pox advanced at a more rapid pace than the first, and that there was the same difference between the two eruptions that is observed between small-pox and varicella.

496. 2d. *Vaccinella from the inoculation of vaccinia upon individuals who had previously had natural or inoculated small-pox.*<sup>2</sup>—When persons who have formerly had small small-pox are vaccinated, the operation is usually without effect. Occasionally, however, a vaccine eruption, modified in its external appearances, and in its progress, is excited. This result cannot be more aptly compared than to the varicella which the variolous poison produces in some vaccinated individuals, or to the eruptions observed among the inoculated or small-poxed, who are submitted to a fresh inoculation of the variolous virus. However this may be, the progress of this modified vaccinia or cow-pox is as follows:

From the first, occasionally on the second, and at latest on the third day, the punctures inflame, and pustules, most commonly of a circular shape like those of cow-pox, are formed. Their margins are flat, irregular, and not distended with fluid, which is always scanty, and of a pale-yellowish colour. The areola, occasionally as bright, is rarely so broad as that of vaccinia, although it appears at any earlier period. During the whole time this process is going forward the punctures and then the pustules are affected with an insupportable pruritus; the axillæ are occasionally painful, and the axillary glands become enlarged; headache is also felt at times, or irregular febrile paroxysms intervene. The inflammatory period is very rapid; there is no tumour nor circumscribed induration as in regular vaccinia, and if some degree of puffing be felt around the puncture it is irregular and superficial. The scabs, well formed from the seventh or eighth day, are detached nearly at the same period as those of vaccinia, and occasionally sooner. They often present the same appearances, with this single difference, that they are not so large nor so thick, and that they do not leave cicatrices, but merely marks on the skin. The fluid of the pustules is contagious, and inserted under the skin by a puncture; the disease can be propagated like legitimate vaccinia, but without proving preservative in the same degree against small-pox.

497. 3d. *Vaccinella from the accidental inoculation with cow-pox of an individual who had had small-pox.* Jenner relates<sup>3</sup> that he saw five persons on the farm of Mr. Andrews, who after having had small-pox, contracted cow-pox from milking kine affected with this disease. But he adds, that the eruption was incomparably milder than it commonly proves.

498. 4th. *Vaccinella from the simultaneous inoculation of variola and vaccinia.*<sup>4</sup> When the variolous and vaccine virus are inoculated as nearly as possible at the same time, they reciprocally modify each other's action. The vaccine pustule produced under these circumstances appears like, but somewhat smaller in size than that of the natural vaccinia upon the fourth day after the inoculation; on the seventh and eighth days the areola is scarcely perceptible, and on the ninth and tenth no true vaccine tumour is formed. On the other hand the inoculated variola is itself modified in its characters, and appears with the features of the umbilicated pustular varicella.

499. 5th. *Vaccinella from the insertion of vaccinia during the incubation of the variolous contagion or the period of the precursory variolous fever.* Many cases have been related of vaccinia modified by small-pox, either in its external characters or in its duration. In a case which I have just seen at La Charité, cow-pox is developed in

<sup>1</sup> Moreau. Rapport de la commiss. de vaccine (Rev. médic. 1825, t. viii. p. 170).

<sup>2</sup> Rapport de la commission médico-chirurgicale instituée à Milan, 8vo. Paris, an. x.

<sup>3</sup> Op. cit.

<sup>4</sup> Willan on vaccine inocul., 4to. Lond. 1806.



an individual who has already felt the influence of small-pox contagion. (The elevations of small-pox appeared at the beginning of the seventh day from that of the vaccination, after four days of initiatory variolous fever, and at least eight if not ten days after exposure to small-pox infection.) The vaccine pustules had their usual duration; they were only not accompanied on the seventh and eighth days with that degree of inflammation which produces the hardness, known under the name of the *vaccine tumour*.

CASE LXXIV.—*Vesicular varicella* (chicken-pox); *vaccination and development of vaccinia*; *appearance of small-pox on the seventh day of the vaccination*. P. M. Dufeu, 33 years of age, presented himself for admission into La Charité, on the 9th October, 1833. He was in the third day of an eruption of vesicular varicella, the precursory phenomena of which had been extremely slight and had only lasted six and thirty hours. The patient was without fever; the eruption was scanty and looked shrunk in many places, in which small red spots irregularly rounded, were perceived, covered in the centre with a slight scab, or incrustation of dried blood. Under the clavicles, and in the axillary spaces the eruption preserved its primary character. It consisted of vesicles a little larger than hemp seeds, of a rounded figure, very prominent, widely scattered and filled either with a transparent or an opaline fluid. Each of these vesicles was surrounded by a red areola of a diameter the double of itself. October 12th.—The shriveled vesicles had lost their transparency, and several of them which had been ruptured by the friction of the clothes were covered with a small brownish scab. On the 17th the recovery was complete.

Small-pox, at this period, was rife in Paris, and several of the patients in La Charité were attacked. This patient not appearing to have been vaccinated, or at least having no variolous or vaccine cicatrices about him, I had the operation done at the Royal Academy of Medicine on the 19th of October; three deepish punctures were made on the inner aspect of both arms.

October 20th and 21st, a small bloody point showed the spot where each of the punctures had been made. 22d.—Third day of vaccination; the patient, towards evening, felt feverish; the appearance of the pustules had not changed. 23d.—Headache, nausea, higher fever; the punctures are slightly prominent and surrounded by a red circle. (*Low diet, lemonade, foot-bath.*) 24th.—Headache worse; nausea incessant. The vaccine elevation, which is readily distinguishable, has not enlarged; in its centre a point of a pale rosy hue is perceived, veiled by the epidermis. 25th.—Same general phenomena. The vaccine pustule larger this day than yesterday, is of a bluish-white colour; its centre is slightly depressed. The areola is not more than a line in breadth. Same treatment continued. The patient revaccinated. 26th.—Seventh day of the vaccination; the patient is freer from headache and fever. The vaccine pustules are small, not being more than two lines in breadth, and are but slightly prominent.

This almost entire cessation of the febrile symptoms coincided with the appearance of a new eruption which I remarked at the morning visit. A considerable number of small, red, and slightly prominent spots, the size of flea bites, several of which were in contact at their edges, had appeared upon the face, and in smaller numbers on the breast and arms: small-pox, as I have said, was prevalent; four days of febrile symptoms had preceded the appearance of the eruption: I had no hesitation in deciding on the variolous nature of this eruption. 28th.—The eruption is confluent on different parts of the face; some of the pustules have already assumed the umbilicated form; several are evolved on the very circumference of the vaccine pustules with which they cohere. The areola of the latter is not more extensive than before; it is of a bright enough colour, but of little breadth.

30th.—The small-pox pustules in the neighbourhood of those of the cow-pox, resemble them so closely that it would be impossible to distinguish the one from the other, had not the points upon which the vaccination was performed been particularly noted. The desiccation is commencing in their centre; there is no longer any areola properly speaking. The variolous pustules of the face have an opalescent look; the whole countenance is slightly puffed. 31st.—Slight epistaxis; some confusion of head, and wandering of ideas. November 1st.—Unequivocal symptoms of secondary fever; pyalism; rambling talk; heat of surface, &c.; the swelling of face continues; the pustules are flat and umbilicated on the arms, globular on the face. 2d.—The

vaccine pustules are covered with yellow crusts; several of the variolous pustules of the face begin to dry; the pulse is pretty full without hardness or frequency. 3d.—The pustules of the trunk and limbs are in full suppuration. 5th.—Both vaccine and variolous pustules are drying apace. 6th.—The face is fully incrustated, and from the 7th to the 11th, the drying and fall of the scabs proceeded on the other parts of the body. The crusts of the vaccine pustules were not detached till the 9th of November (22d day of the vaccination). They left red marks behind them without distinct depressions.

500. It would appear, that a kind of spurious cow-pox may be developed on the teat of the cow, and be transmitted to man by contagion. The degree of analogy which these false cow-pox bear to the true account of which is blended by Willan and Bateman with that of rosa disease, and which these false cow-pox transmitted to the human subject bear to vaccinia, is as yet ill ascertained. The eruption observed by Loy,<sup>1</sup> has no apparent resemblance to vaccinia. In the beginning of 1801, this writer saw an eruption on the hands of a farrier, which appeared shortly after having dressed the heels of a horse affected with *grease*. The eruption consisted of separate round pustules, like blisters produced by a scald, containing a limpid fluid, having a slight black speck in the centre, and being surrounded by an inflamed areola. During the whole course of this disease the man did not suffer from fever.

#### Historical Notices.

501. I have already signalized the principal characters which distinguish legitimate vaccinia from vaccinella (§ 485). These differ in the contagious nature and specific properties of the fluid they contain, and in the progress and form of the pustules, from those *accidental* pustules which have been improperly denominated *spurious cow-pox* or *spurious small-pox*, according as they have followed the inoculation of matter taken from the pustules of subjects who had previously been vaccinated or had had small-pox, in which the contagious and specific properties were extinct.

None of the varieties of vaccinella protect completely from small-pox; they however seem to render individuals less apt to contract the disease. They are always very mild complaints, and require no treatment.

502. Of all these eruptions, one only has been studied with particular attention; that, namely, which is produced by inoculating with vaccinia individuals affected with small-pox or already vaccinated. The other varieties of vaccinella have been rather hinted at than particularly described, and their history requires elucidation by additional experiments and researches.

M. Bousquet admits no more than a single species of spurious cow-pox. Nissen<sup>2</sup> recognizes two, proceeding from two different species of cow-pox (the one with *black* and the other with *amber coloured* pustules). Hellwag has described a third variety, characterized by vesicles filled with a yellowish and non-contagious serum; Viborg admits as many as nine species of cow-pox. By making the varieties of *spurious cow-pox* or *varicella* a particular subject of study, the counterparts of the different varicellæ may perhaps be detected. (Vide sub. cow-pox in vocab.)

According to Eichhorn,<sup>3</sup> re-vaccination occasionally produces legitimate and *unmodified*, but much more frequently *modified* vaccinia. The latter includes four varieties: 1. *Purulent* modified vaccinia; 2. *Lymphatic* modified vaccinia; 3. *Tuberculo-pustular* modified vaccinia; 4. *Tubercular* modified vaccinia. To each of these varieties he assigns particular characters.

<sup>1</sup> Loy. An account of some experiments on the origin of cow-pox, 1 vo. 1802.

<sup>2</sup> Kühn (C. G.). Op. cit. p. 13.

<sup>3</sup> Eichhorn admits four species of modified vaccinia, a title which he restricts to the eruption developed on the vaccinated by the inoculation of the true vaccine virus. He distinguishes carefully between *modified* vaccinia and *spurious* vaccinia, which, according to him, arises from the false cow-pox of the animal. He has re-vaccinated an immense number of individuals; 283 of the whole number remained unaffected, but among the rest, the four varieties of *modified* vaccinia specified in the text, were produced in various proportions. The three first of these, Dr. Eichhorn informs us, are capable of producing true vaccinia inoculated upon the unvaccinated. He was unable to prove that the fourth variety had the same property. Op. cit. p. 486.



## ACNE.

Vocab. *Acne*, *Ionthos*, *Varus*, *Whelk*.

503. *Ætius* in ancient, and *Sauvages* in modern times, employed the word *acne* to designate the red tubercles of the disease which we shall describe under the title of *Rosacea*. More lately, *Drs. Willan* and *Bateman* have included under this denomination, the *couperose*, the *dartre pustuleuse millaire*, and the *dartre pustuleuse dissimulée*, of *Alibert*. The term *couperose* (the *rosacea* or *gutta rosea* of English writers), being generally adopted in France to signify a chronic and pustular inflammation affecting the follicles of the skin of the face, I have felt myself compelled to use the word *acne* in a more restricted sense than that in which it was employed by the English pathologists, and to take it as indicative of the affection particularly described by *M. Alibert* under the title of *dartre pustuleuse dissimulée*, and which was blended with *couperose* by *Willan* and *Bateman*, under the head of *acne punctata*. Whilst I thus separately describe these two affections, I begin, nevertheless, by acknowledging that *acné* (the disseminated pustular tetter of *Alibert*) occurs under the same form, and affects the same elements of the skin as *rosacea*. I have, in fact, only consented to separate these two varieties, because the term *couperose* (*rosacea*) is applied in France to a very rebellious disease of the face, while *acne* is frequently an eruption attending adolescence, much less serious in its symptoms, and confined exclusively to the skin of the trunk.

In an anatomical point of view, syeosis, along with *acne* and *rosacea*, constitutes a third variety of one and the same form of pustular inflammation. The principal features which severally distinguish these three affections from each other, may be explained by the diversities of structure observed in the skin of the face generally, of the chin in particular, and of the trunk, especially as regards the number, disposition, dimensions, and depth of the sebaceous follicles of these different regions. (a)

*Acne*.—Under the title of *acne*, then, I shall describe a chronic inflammation of the sebaceous follicles common in youth and manhood, characterized by isolated acuminated pustules, most usually developed on the shoulders, sternal and scapular regions, the skin of which looks dense and unctuous, and more rarely on the face; these pustules are succeeded by livid or violet-coloured spots, by tuberculated indurations of the same, or of a milky-white hue, almost always intermingled with the accumulations of sebaceous matter with black points, vulgarly styled *worms*, and with follicular enlargements. (b)

(a) *Acne*, regarded as a genus by *Willan* and *Bateman*, is by them divided into four species, viz., 1. *A. simplex*; 2. *A. punctata*; 3. *A. indurata*; 4. *A. rosacea*—to which was subsequently added *A. syphilitica*. The first is *simple pimple*, the second *maggot pimple*, the third *stone-pock*; and the fourth *rosy drop* or *gutta rosea*.

(b) *Acne* by *Willan* and *Bateman* is placed among the *tubercula*, but by *Alibert*, *Bielt* and *M. Rayer* it is arranged with the pustular diseases of the skin. The latter is the correct view; the tubercles or circumscribed indurations, so constantly observed in this affection, being, as *Dr. T. J. Todd* (*Cyclop. Pract. Med.*) justly observes, the consequences of pustules, but not constituting the elementary forms of the eruption.

The peculiar seat of *acne* is stated by the author in the text, to be the sebaceous follicles; a location for the disease asserted by *Plumbe* to be its uniform one, and never, as some allege, the cellular texture of the corion. *Willan* had indeed made the follicular the character of his second species, or *acne punctata*; and by *Dr. Todd* it is called *follicularis*. *Plumbe* describes *acne*, syeosis, the scrofulous form of disease of the follicles, and lupus, or *noli me tangere* as four varieties of disease, depending on, or connected with obstructed and diseased follicles; while the pustules of the more obstinate forms of *porrigo* may be, he thinks, with propriety considered as the result of the local irritation of the hair.

"In its most simple and trifling form, the disease consists merely of obstruction of the sebaceous follicles, in consequence of their contents becoming too hard to pass readily to the surface. Inflammation of the follicle and the production of what is called a pimple result,

504. *Symptoms*.—The pustules of *acne* always appear in succession, one after the other. Usually scattered over the trunk, and occasionally over the face, the disease may be confined to the sternum and shoulders, or it may appear over the whole of these regions, and even extend to the posterior parts of the arms, to the cheeks and to the forehead. It is commonly evolved without heat or local pain, and very generally without pruritus. I have seen several young people seeking advice for a few spots of *acne* developed on the sternal region, whose backs were covered with the pustules of the disease, without their being aware of the circumstance.

Some of the pustules of *acne* are very small, others are a little larger. The first, at their origin, appear under the form of small inflamed and slightly conical elevations, the bases of which are hard and surrounded by a red blush or areola. These elevations suppurate slowly, and each pursues its course independently of the others around it; in the same individual, consequently, it is usual to find, at one and the same time, elevations not yet purulent, pustules in a state of suppuration, and others transformed into tubercles, or replaced by indurations of a milky-white colour, or by small cicatrices. The more voluminous pustules begin as follicular elevations or tumours full of sebaceous matter: either from over-distension or some other cause, the follicles themselves have become inflamed. By compressing the portion of skin surmounted by these pustules between the fingers, it is easy to ascertain that the stuff which can be squeezed from their summits is veritable pus; whilst the matter that remains within them, and which may also be forced out by continuing the pressure, is of a sebaceous nature, similar to that which is contained within the follicular elevations disseminated in the neighbourhood of the pustules. When the pustules begin to fade, their tops become covered with a small scab of variable thickness, which is soon detached, either spontaneously or by the friction of the clothes. Small spots of a livid-red, slightly elevated, and which disappear very gradually, proclaim at a later period the particular points which had been the seat of pustules. These are sometimes followed by small indurations of a milky-white colour, the size of a small pea, somewhat similar to the cicatrices that follow leech bites, although differing in shape. Lastly, the pustules of *acne* are often partially transformed into violet indurations, the resolution of which is generally looked for very long in vain. These tubercles are frequently of a violet-red colour, very analogous to that presented by such as are of a syphilitic nature. The tubercles of *acne* may, however, be distinguished from those of syphilis, by characters more positive than any that belong to colour, a class of signs, the value of which in diagnosis has been very much overrated by some pathologists.

In *acne*, the sebaceous follicles, besides being affected with suppuration, very commonly present three remarkable morbid phenomena; the orifices of the follicles of the skin of the back, shoulders, anterior part of the chest, and occasionally of the face are extremely apparent; the skin of the same districts is unctuous and shining; the pustules of *acne* are mixed with the concretions called *worms* indicated by more or less conspicuous black points, and formed by the accumulation of sebaceous matter within the follicles, from the cavities and ducts of which it may be extracted upon the point of a pin, or by pressure between the fingers. Further, the follicles of the sternal regions are occasionally hypertrophied in *acne*, and appear under the form of globular, or rounded and somewhat flattened bodies, not prominent, and of a duller white than the linear spaces of the skin which separate them. Lastly, small whitish and rounded granula-

and are soon followed by the formation of matter; the follicle is destroyed by this process, the matter is discharged, a little redness remains for a day or two, and the part returns to the healthy state."

"The situations in which the eruptions designated as above, make their appearance, will generally be sufficient to enable us to determine their character. It has been observed in a preceding page that the sebaceous follicles are chiefly distributed to the face, more particularly on the forehead, tip and alæ of the nose and the adjoining parts, and less copiously on the chin. Next to these the chest, below the clavicle, to about the fifth or sixth rib and the back to an equal extent, are most liberally furnished with them; and as the disease consists in the derangement and inflammation of these structures, it is these parts solely in which it makes its appearance." (*Plumbe, op. cit.* pp. 47-8.)



tions, the size of a pin's head and formed by follicles, the orifices of which are either very little or not at all apparent, are frequently observed among the pustules and sebaceous concretions, especially on the fore-part of the breast. In some individuals, these follicular elevations are more numerous than the pustules; in others the contrary disposition is observed to obtain. Thus several cases of acne compared together always show great variety in the disposal of the pustules or of the indurations left behind these, as also in the number of the sebaceous concretions and follicular elevations that occur.

Such is commonly the progress, and such are the appearances presented by acne. It is by no means rare to meet with this eruption associated with rosacea or sycosis, affections which occasionally replace it in maturer years. Several other inflammatory affections of the skin may accidentally occur in the course of acne without their appearing to exert any influence on its progress or termination. I have seen an adult affected at the same moment with acne, with herpes phlyctenodes of the face, trunk, and scrotum, and with pulmonary catarrh. I attended another young girl labouring under acne, herpes of the nose, and pulmonary tubercles; and an adult who presented a remarkable example of acne and chloasmata or liver spots of the skin.

The follicles of the scrotum, which are commonly very large, are occasionally affected with acne, precisely in the same manner as those of the upper part of the trunk. I have seen these follicles, distended with sebaceous matter, become transformed into pustules, from which the contents,—pus and sebaceous concretions, could be forced by squeezing them between the fingers. This change of the follicles of the scrotum is altogether independent of a venereal cause.

505. *Alterations of structure.*—The mode in which the pustules of acne are formed, the different morbid features that almost invariably accompany the disease, (*greasy state of the skin, sebaceous concretions, large size of the follicular orifices, &c.*) the enlargement of the follicles on those regions of the skin where the acne appears, the immunity from this disease enjoyed by those districts unprovided with sebaceous follicles, such as the palms of the hands and soles of the feet, are so many circumstances that authorize us in assigning the follicles as the element of the skin, which is particularly attacked in acne. This presumption, indeed, becomes matter of certainty, when the nascent and untouched pustules of the disease (or those which are older), after being laid open with the point of a lancet, are examined through a magnifying glass. Mr. Plumbe first satisfactorily demonstrated this anatomical fact; but he fell into an error, when he maintained that the inflammation of the follicles was always excited and kept up by the accumulation of sebaceous matter within their cavities. The whole of the pustules of acne certainly do not appear as sebaceous concretions, or follicular elevations at their outset; a certain number only commence in this way; the rest from their origin exhibit inflammatory characters (sanguineous injection, followed by the formation of pus), and blood or pus may frequently be extracted from their cavities unmixed with indurated sebaceous matter. Further, the greasy exudation upon the skin, the follicular elevations with or without inflammation, and the pustules of acne are consequences of different pre-existing morbid conditions of the sebaceous follicles. The accuracy of these remarks in regard to the seat of acne has recently been called in question; but their truth is demonstrated by the minute study of the mode in which the pustules of the disease are formed, and by a comparative examination of the elements composing the skin in different regions of the body.

506. *Causes.*—Billard, in his work on the diseases of infants,<sup>1</sup> informs us that he never saw acne in children at the breast. Children further advanced seem also almost completely exempt from the disease; the great majority of the cases I have met with, indeed, have occurred among individuals from about fourteen to thirty-six years of age. In these, the acne was almost always associated with rosacea, more rarely with sycosis, diseases which, to individuals of maturer years, are analogous to acne attacking earlier in life. As to the causes of acne, they are for the most part extremely obscure. In young females, the disease seems occasionally to coincide with the occurrence of dysmenorrhœa. I have frequently seen it prove ex-

remely troublesome in individuals possessed of the best constitutions; and on the other hand, I have known it attack young persons addicted to certain secret vices, and those subject to abdominal irritations, or given to the use of spirituous liquors. (a)

507. *Diagnosis.*—Acne is a disease easily distinguished from all others. If rosacea, sycosis, and acne are chronic inflammations essentially of the same nature, if they affect the same element of the skin, the three eruptions are still easily distinguished from each other by the regions upon which they commonly make their attacks, and by several other peculiarities which result from the unequal development of the vascular rete, and of the follicles in these different districts of the integuments. Those fiery spots which accompany the tubercles or pustules of one form of rosacea, developed on the nose and cheeks, are never observed on the shoulders or sternal region, however thickly they may be beset with the pustules or tubercles of acne. The pustules and tubercles of sycosis are not seen intermingled with sebaceous concretions and follicular elevations like the pustules of acne. Psudracious pustular syphilis, and some forms of artificial inflammation developed on the skin of the trunk, alone present an apparent analogy with the *dartre pustuleuse disséminée* (Alibert) or acne. Thus psudracious syphilitic pustules, like those of acne, present a small purulent deposit at their apex, and are occasionally scattered over the trunk, but they are not confined to this, and several are seen at the same time on the extremities. Further, the pustules of acne are more prominent than those of the syphilitic affection, which are of a violet hue in the middle, with a copper-coloured base. The skin which separates the pustules of acne is shining, oily, and studded with sebaceous concretions or follicular swellings. In psudracious syphilis, these products of augmented follicular secretion are not observed; the skin between the pustules has its natural colour and appearance. It is occasionally earthy and sallow, indeed, a character which, as being common to many chronic diseases, has been specified very malapropos as characteristic of syphilitic eruptions. The small cicatrices consecutive to psudracious syphilitic pustules differ from those of acne, in being livid and depressed, whilst those of acne are very commonly raised. At first sight, the purple or livid and circumscribed indurations consequent on the pustules of acne might be taken for syphilitic tubercles; but the latter are not preceded by pustules; left to themselves they usually end by becoming ulcerated, and covered by thick incrustations under which there are formed, not white and rounded indurations like those of acne, but small depressed cicatrices, or a kind of irregular zigzags, and spiral puckerings of the skin. Lastly, syphilitic pustules and tubercles are often mixed with spots or papulæ of an unequivocal nature, to say nothing of the other symptoms of lues with which they are always accompanied.

The information received in regard to the diseases which occurred previously to the development of these eruptions, are of less value in establishing the diagnosis than is often believed; from this source presumptions only can accrue, which, hastily adopted as truths, might lead to serious errors. I have treated several individuals successfully for true acne, by means of blood-letting and sulphureous baths, who had been recommended to undergo, or who had undergone a course of mercury, for the sole reason that they had had one or two attacks of venereal disease, and now bore about upon their shoulders certain violet-coloured spots, and sundry small cicatrices.

The pustular inflammations, artificially excited in the skin of the trunk by the application of pitch plasters, with or without the addition of tartrate of antimony, by frictions of croton oil, the juice of the euphorbia, latyrus, &c., differ from acne, not only in the particular causes which excite them, but further, in their progress and external characters. They, in fact, have nothing in common with acne except their seat, which, like that of this disease, is primarily in the follicles of the skin.

508. *Prognosis and treatment.*—When the pustules and follicular swellings of acne are few in number, they are rarely thought of as the

(a) With Copland (*Dict. Pract. Med.*) we would say, that the simple, indurated, and punctated species of acne are most frequently occasioned by uterine irritation and excitement, or an imperfect performance of the uterine functions; by constipation; by torpid conditions of the liver; and by the injurious addiction to onanism.

<sup>1</sup> *Traité des Maladies des Enfants Nouveau-nés et à la mamelle*, 8vo. Paris, 1828.



subject of medical treatment, unless, indeed, they chance to be accompanied with the pustules of rosacea or sycosis. In well-constituted youths and girls they frequently disappear of themselves, seemingly from the changes undergone by the constitution as the period of maturity is attained. The cold bath, frequently repeated, is of great service when the disease is connected with indulgence in pernicious practices, when there are no symptoms present of any chronic affection of the lungs or intestines. When acne can be traced to such causes as those hinted at, and the habitual excitement of the alimentary canal by the use or abuse of vinous or spirituous liquors, it is important, in the first place, to remove and prevent their further operation.

Should a considerable eruption of acne have appeared on the shoulders and bosom in a young and otherwise healthy individual, it will be proper at first to detract some blood, and to make use for a season of acidulated drinks and the cold bath, the effects of which the patient will strive to aid, by leading a regular and quiet life. The cold sulphureous bath may be afterwards employed with great advantage, every day, or every other day, alternately with the simple cold bath, and this is a plan which will generally be found to answer best. I have employed with no less benefit the cold sulphureous douche, especially in that form of the disease which is complicated with follicular concretions and indurations. I have not made many trials of the effects of sulphureous waters administered internally; such as I have made, however, are not favourable to the practice; besides, most patients show a repugnance to so disgusting a drink. Sulphureous waters may, however, be used at the same time internally that they are employed externally by way of bath or douche. The number of sulphureous baths necessary in any case, varies according to the extent and standing of the eruption, and the state of the constitution. When the neck, shoulders, back, and bosom are covered with tubercular indurations, the consequence of long-continued and repeated eruptions of acne, in individuals otherwise well constituted, the vapour bath always assists, and occasionally accomplishes the entire resolution of these indurations.

Lastly, eruptions of acne have been observed appearing each year with the approach of spring, dying away in the autumn and winter, and at length vanishing not to be reproduced, from the sole influence of the progressive development of the organization. (a)

(a) The treatment of acne will be modified by our knowledge of the cause. Thus, where it depends on uterine disease, as dysmenorrhœa and amenorrhœa, we must address our remedies to a removal of these. In some cases of this character, I have prescribed the iodide of potassium, alternated with syrup of sarsaparilla, with the happiest results. I could point to different married women, who had been previously sterile and annoyed at the same time with acne simplex and punctated, and sometimes assuming the appearance of rosacea, become mothers with this treatment, and lose almost entirely their cutaneous disfigurements.

The relief to the system that sometimes follows the eruption of acne will induce caution in the use of repellents for its removal, and at the same time suggest its connection with disordered digestion. The remedies adapted to this latter, will be first used; giving a preference to mercurial and saline purgatives, and antimonials in the first or acute stage—and rhubarb and magnesia, and alkalies and tonics in the second or chronic form. In some cases the mineral acids have been used with good effect.

This treatment and simple regimen are the more necessary where disorder of the digestive organs has been the immediate exciting cause of acne, and where the symptoms of such disorder appear to be materially alleviated by the appearance of the eruption.

Most stress is usually laid on the local treatment of acne, but not seldom in oblivion of correct pathological principles. In its first stage the eruption is the result of irritation and active inflammation; and hence it ought not to be treated either by strong stimulants or repellents. At this time simple vapour, or frequent bathing of the parts with warm water and "gentle friction with the mildest kind of soap," constitutes by far the best local application, before matter has been discharged from the tubercle. "If any vestige of active inflammation remain, it should be soothed, and suppuration promoted by poultices and fo-

### Historical Notices.

509. According to Cassius<sup>1</sup> the word acne is derived from ἀκμή *akmē*, *vigores*, and signifies that the eruption is usually developed about the age of maturity, and is frequently associated with a kind of vigour of constitution. This eruption appears also to have been designated by the names, *vari*,<sup>2</sup> *ionthos*,<sup>3</sup> *puncta mucosa vultus* (Darwin), and *grutum seu milium* (Plenck). It has been described by M. Alibert under the title of *dartre pustuleuse disseminée*.<sup>4</sup> It is a disease of little severity, without important individual varieties, and one of which it seems unnecessary to give the details in particular cases.

### ROSACEA.

Vocab. *Bacchia, Acne rosacea.*

510. Rosacea is a chronic non-contagious inflammation affecting the follicles of the skin of the face, characterized by the successive eruptions of small isolated and acuminate pustules, the bases of which, indurated in different degrees, are surrounded by an inflamed areola. These pustules appear dispersed, especially over the cheeks, nose and forehead, and occasionally extend to the ears and upper parts of the neck. To these pustules succeed a dilated and arborescent state of the superficial blood-vessels in their vicinity, or small, hard, red, circumscribed and excessively indolent tubercular indurations, the resolution of which is always brought about with extreme difficulty, if, indeed, it can ever be accomplished entirely.

511. *Symptoms.*—In its most simple form rosacea appears in the shape of small red pustules disseminated over the face. They are evolved successively without local heat, or any other sensation than that of a very slight tingling in the skin. Each of these pustules arises, suppurates, and dries up or passes into the indurated state independently of those in its vicinity. The suppuration is slow; the tops of the pustules are not covered with a slight scab sooner than the middle of the second week. The pustules of rosacea are frequently seen intermingled with small black points which project more or less from the surface, and are formed by a thick solid unctuous matter accumulated within the follicles of the skin. When these

mentations; and if any tubercle should be found assuming the blue colour without signs of matter coming forward, it should be freely punctured." After the evacuation of the tubercle and the temporary irritation from puncture is removed, Plumbe, whose advice I have just repeated, thinks that stimulants are plainly called for, and of these he gives the preference to spirituous lotions, and particularly to a solution of the bichloride of mercury in proof spirits, in the proportion of five grains of the former to eight ounces of the latter. With this the spots are to be lightly sponged. In acne *indurata*, they who have made trial of the remedy, will join Plumbe in his favourable opinion of the topical use of mercurial ointment, and I would add the recommendation of camphor accurately mixed with it. M. Bielt, again, assures us that none of the resolute preparations for acne *indurata* are comparable to the iodide of sulphur, mixed with lard:

R. Sulphur, ioidid. gr. xii ad xxiv;

Adipis 3i;

M. ft. unguent.

The good effect of all these means is much promoted by the vapour bath, directed in the form of a douche, on the eruption.

A severe but efficient remedy is blistering the diseased surface, a practice first suggested by Ambrose Paré and revived by Darwin.—A solution of the muriate of ammonia is used with advantage in chronic cases of simple acne.

Internally acne *indurata* may be treated by the use of iodide of potassium and iodide of iron together with vegetable syrups, as that of sarsaparilla.

<sup>1</sup> Cassius. *Naturales et medicinales quæstiones*. Problem. 33. Zurich. 1562, 8vo.

<sup>2</sup> Celsus. *De re medicâ*, lib. vi. cap. v.

<sup>3</sup> Pollux (Jul.). *Onomasticon*, lib. iv. cap. xxv.

<sup>4</sup> Alibert. *Précis théor. et prat. des malad. de la peau*, t. i. p. 275.



small points are numerous and closely set together, the skin of the nose assumes a thick and greasy appearance, and that of the cheeks becomes rough and uneven.

Commonly, however, the pustules of rosacea are of larger dimensions than those now described; they are then also more numerous and more closely crowded together; their form is conoidal, their base broad and hard, their colour of a ruddy violet; they are indolent, and the pus does not appear at their apices till after the lapse of several weeks. They are occasionally assembled into clusters, and so closely set together that they seem to form a flattened tumour. These pustules are most highly inflamed among individuals of a sanguine temperament and in the prime of life. They are excited by the slightest irregularity in diet, entering a hot room, &c., and under these various influences, they run their course more rapidly; but they then usually succeed each other more rapidly and in greater numbers. In this form of the disease, the follicles and vascular rete of the corion are principally affected, and the subjacent cellular tissue occasionally shares in the swelling of the common integument. After their disappearance the majority of these pustules leave a livid mark behind them, and a depression in the part of the skin they have occupied, which is seldom, if ever, completely effaced.

Another variety of rosacea belongs to the period of perfect manhood. Some red spots, which have appeared on the nose and cheeks, become affected with a troublesome pruritus after meals, a few glasses of strong wine, or a little of any spirituous liquor. By degrees these red patches of the nose become habitual, spread, assume a more vivid hue, and before long look as if studded, here and there, with small pimples, which gradually increase in number, and spring up crop after crop, their yellow purulent heads contrasting strongly with the ruddy violet of the surrounding skin upon which they are evolved. This colour does not vary perceptibly to any great extent, although it looks rather deeper towards evening, after meals, and in the immediate vicinity of the pustules. The parts upon which pustules have sprung up repeatedly are swollen, hardened, and acquire the character of true tubercular *indurations*. The minute veins dilate and form blue lines which ramify irregularly through the substance and over the surface of the skin. The disease spreads upon the cheeks, forehead and chin, and finally gains possession of the whole face; the features enlarge, and the countenance is altered and disagreeable. When the disease has existed for a great length of time, the skin becomes uneven and rugous, and, whatever may be done, can never again be restored to its original and natural state.

Besides these differences in the size, number, and course of the *pustules*, *erythematous blotches* and *tubercular indurations* of rosacea, the disease appears with considerable shades of variety according to the extent of integument it implicates, the length of time it has existed, and the nature of the affections with which it is complicated. In one case the pustules, limited to a small space, are few in number, isolated, and after a time leave no trace of their existence on the skin beyond a slight degree of redness; in another they are very numerous, succeed each other rapidly, sprout over every part of the face, and even spread to the neck. When the disease acquires a great degree of intensity it is frequently followed by dark-red or violet-coloured tubercles of various dimensions; the conjunctivæ inflame; the gums become painful and swell, and the teeth suffer from a chronic form of inflammation which attacks the membrane of the mouth.

In other cases of rarer occurrence than either of these, rosacea does not extend beyond the *alæ* of the nose, upon which tuberculated *excrescences* or *tumours*, of a red colour, and considerable size, are developed. The whole of the tegumentary tissues of the nose are hypertrophied in these cases, so that this member of the face occasionally becomes of twice, and even three times, its usual size.

512. *Causes*.—Rosacea most usually attacks men between the thirtieth and fortieth year of their age; it is very frequently connected with some degree of chronic inflammation of the mucous membrane of the stomach and intestines; its association with a disordered state of the liver is more rarely demonstrated, notwithstanding the opinion to the contrary so incessantly revived. Females seem even more subject to rosacea than men, and are generally attacked about the critical period of life. The disease may also

appear upon any accidental suppression of the menstrual flux, disappear with the return of this natural discharge, or coincide with simple dysmenorrhœa. Rosacea is rarely aggravated by pregnancy; and it occasionally improves or even vanishes entirely during the period of utero-gestation. Rosacea is often of hereditary origin, and may in many cases be traced through several successive generations.

Indulgence in the luxuries of the table, violent or concentrated moral affections, certain professions which require constant application, and an attitude that favours the flow of the blood towards the head, or prevents its ready return from thence, are common causes of rosacea. The use of certain pigments or *rouges* and of cosmetics generally, causes the disease much less frequently than has been imagined.

Cold and moist climates have been supposed to have an influence on the development of rosacea. The disease is certainly more common in England and the north of Germany than in more southern climes; but the circumstance may be explained from the mode of living followed there, the use of a highly stimulating regimen, and the custom of drinking strong wines, and large quantities of malt and spirituous liquors.

513. *Diagnosis*.—Rosacea is easily distinguished from every other pustular disease developed on the face. The pustules of rosacea never attain the size, and are never covered with the adhering scabs proper to those of ecthyma. They do not run together, and never present thick incrustations like those of impetigo; such crusts as they do exhibit are never laminated like those of eczema *impetiginodes*.

The pustules of rosacea are not likely to be confounded with the papulæ of lichen; and the small scabs that form on the tops of its pustules can never be mistaken for the *accidental* thinner and more extensive incrustations, spread over a scaly surface, that distinguish the chronic and excoriated forms of lichen affecting the face. Pustules and tubercles of syphilitic origin are rarely evolved on the face only; they are most commonly observed over the whole of the body, or, at all events, a large extent of its surface at the same time. Syphilitic psudracious and phlyzacious pustules have peculiar and distinguishing characters. When syphilitic tubercles do chance to exist exclusively on the face, they are usually seated around the *alæ* of the nose, about the commissures of the lips, and are almost invariably cleft on the surface, so as to appear like morbid growths. They are, further, distinguishable by their shining aspect, their coppery colour and their tendency to ulcerate. The tubercles by which lupus commences, superficial and very slightly raised at first, will scarcely be confounded with the tubercles that occasionally succeed the pustules of rosacea. The tubercles of lupus increase in size, acquire a livid hue, extend from the nose to the cheeks, and, the subjacent tissues becoming affected, all are alike destroyed by the ulcerative process to which the disease naturally tends; these are circumstances sufficient to render any mistake impossible.

514. *Prognosis and treatment*.—We may hope to succeed in our treatment of rosacea, when the individual affected is still young, when the eruption is recent and of no great severity, and when it can be traced to irregularities in regimen. On the other hand, when the disease has arisen in an individual already arrived at maturity of years; when it has continued long and has every year been getting worse; above all, when it can be traced as a hereditary complaint and is very extensive, whether it be connected with a chronic inflammatory state of the digestive organs or not, the best directed modes of treatment will rarely prove efficient in preventing the evolution of fresh pustules, and will, with great difficulty, accomplish the entire resolution of the tubercles that have already been formed.

The ordinary diet of those who are suffering under rosacea should consist of white meats, fresh vegetables and ripe and watery fruits. They should guard against exposure to much fatigue of body, any degree of nervous excitement, long-continued mental exertion of every kind, and they should carefully shun situations in which the temperature of the air is high.

Should the disease have appeared in a young and plethoric individual; should the pustules be numerous, thickly set and confluent; should the tubercles be inflamed and united by their bases, general blood-letting, repeated at due intervals, the reiterated application of



leeches behind the ears, to the temples and ala nasi are generally beneficial. Ambrose Paré<sup>1</sup> recommends the bleedings practised in cases of rosacea to be copious in order to be efficacious: "The patient," says he, "who is attacked with gutta-rosea must be bled from the basilic vein, then from that of the forehead and next from that of the nose; leeches must also be applied to several spots of the face, and cupping-glasses with scarification put between the shoulders." Should rosacea appear to be connected with the disappearance or any irregularity of the menstrual or hemorrhoidal flux, the return of these evacuations must be solicited by the use of the hip-bath, and the application of leeches to the vulva or anus, at intervals corresponding with the periods of the habitual discharges. Diluents internally, the use of whey, a cooling system of regimen, demi-lavements, the general tepid bath administered at a very moderate temperature or almost cold, fomentations with decoction of bran, warm milk, almond emulsion, veal broth, and decoction of quince-seeds, often aid this plan of treatment in its favourable tendencies.

I must add, however, that all these measures rarely prove adequate to effect the cure of rosacea, and that we are frequently compelled to call in the assistance of certain stimulating remedies in addition. The ancients were in the constant habit of using liniments, into which turpentine, vinegar, soap, myrrh and such articles entered in large proportions. At the present day, from the period of the first attack of the lighter and even of some of the severer forms of rosacea, it is customary, after having abstracted blood to a greater or smaller amount, to employ lotions of rose, lavender or sage water, to which from a sixth to a third of alcohol is added according to the state of the pustules. This practice is frequently followed by very good effects. A solution of from four to eight grains of the bi-chloride of mercury to a pound of rose-water and an ounce of eau de Cologne is also occasionally employed under the same circumstances with the best results.

The sulphureous mineral waters of Barèges, of Aix in Savoy, of Cauterets, Schisnach, Harrowgate, Bath, &c., employed by way of fomentations, baths, and douches, are one of the most powerful means we possess in the treatment of rosacea of long standing. Baths of artificial sulphureous waters prolonged for several hours, are scarcely inferior in efficacy.

The nitrate of silver, and the hydrochloric acid have also been employed to give a character of greater acuteness to the chronic eruption of rosacea. For my own part, I have abandoned the use of both these agents in the treatment of this disease. These, and such applications ought in every case to be preceded by the detraction of blood, and made in such wise as not to penetrate the skin too deeply, a precaution without which they are apt to be followed by erysipelas, ulceration and indelible cicatrices. The nitrate of silver is usually selected to cauterize the pustules when they are isolated, the muriatic acid is preferred when they are confluent.

After blood-letting has been duly practised, the steam douche may be advantageously employed to favour the resolution of the tubercles of rosacea. Directed for twelve or fifteen minutes at a time to the face, this application causes a rapid afflux of blood thither, after which the skin becomes softer and feels smoother than it did before.

Pediluvia, with the addition of a small quantity of the nitro-muriatic acid, and the use of calomel internally, have been recommended in this disease, and I have known the practice occasionally to prove beneficial.

The discussion of the tubercles may be farther solicited by the inunction of ointments, of which the ammoniacal proto-chloride, or the proto-sulphate of mercury forms the basis, in the proportion of about a scruple of either of these salts to an ounce of lard. The iodide of sulphur is also occasionally successfully employed under the same circumstances, in the proportion of from ten to twenty grains, to the ounce of lard.

To conclude this enumeration of remedial means, Guy de Chauliac, Ambrose Paré, and Dr. Darwin, have all at different epochs recommended a blister to the whole, or to a portion of the surface affected with inveterate rosacea. This measure is extremely uncertain in its efficacy, and few patients will probably be found willing to submit to the infliction.

In every case it is right to prolong the treatment some time after the

disappearance of the eruption. It is then that the cold sulphureous douche and aspersion act with peculiar efficacy.

515. So long as rosacea was regarded as a depurative or purifying disease, so long was it the invariable practice to employ purgatives, the juices of the water-cress, scurvy-grass, bccabunga, wild pansy, &c., in its treatment. Remedies of this class are less generally made use of in the practice of the present day, if we except mild purgatives, which I am myself in the habit of prescribing with success, especially to individuals of a nervous temperament and habitually constipated in their bowels.

Should rosacea appear to be complicated with any internal inflammatory affection, such as a chronic gastritis or hepatitis, these diseases require to be combated by measures adapted to their seat, their extent and their peculiar nature. (a)

516. Rosacea declines and fades under the influence of diseases of some severity; its cure has occasionally been succeeded by the development of certain diseases which have then been attributed to its repercussion.

Occasionally treated with temporary success by purgatives or mineral waters, rosacea almost always returns after medicines are abandoned, with a rapidity and regularity that induce despair. (b)

#### Historical Notices and particular Cases.

517. Fernelius<sup>1</sup> has given a good definition of rosacea. Guy de Chauliac<sup>2</sup> has recommended the treatment of the disease by means of a cooling system of diet, bleeding from the frontal vein, the application of leeches within the nostrils, and purgatives. "If these means do not succeed," says he, "we must then blister with cantharides." It is consequently a mistake to attribute this piece of practice to Paré.

Darwin<sup>3</sup> has described three varieties of rosacea, established according to their presumed causes (*Gutta-rosea hepatica*; *Gutta-rosea stomachica*; *Gutta-rosea hereditaria*). Sennertus<sup>4</sup> quotes a remarkable instance of *hypertrophy of the nose* and of *tuberculation (vari)* consecutive to rosacea.

Numerous observations have been published in recommendation of blood-letting,<sup>5</sup> of the application of leeches to the nostrils,<sup>6</sup> of antimonial medicines, the application of blisters between the shoulders,<sup>7</sup> and of the preparations of sulphur.<sup>8</sup>

Several cases have also been detailed of *gastro-intestinal inflammations*,<sup>9</sup> of *amaurosis*,<sup>10</sup> and of different other diseases attributed to the recession of rosacea.

518. I limit myself to the details of two cases of rosacea, in which the methods of treatment most usually recommended were pursued. I also re-publish one of Ambrose Paré's cases, in which the bold

(a) The blue pill, with extract of hyoscyamus, extract of taraxacum, sulphuro-saline waters, and iodide of potassium are useful remedies in rosacea, but they must be aided by a well-regulated and prolonged hygienic course. Liquor potassæ, in a dose of 15 to 30 drops, three times a day in milk or decoction of sarsaparilla, is often very serviceable in this and other skin diseases of the pustular and vesicular forms. Solution of the sulphate of iron is a good application, in rosacea as well as in syccosis: the same may be said of the sulphate of zinc, in the form of tepid solution, by means of rags moistened and applied to the part.

(b) The acne syphilitica of other writers is described by M. Rayer in a subsequent part of this volume, § 871, under the head of "syphilita" by the term *psyrdraceous pustules*.

<sup>1</sup> Rubor faciei vel simplex et solitarius, et vel sine pustulis, vel pustules comites habet. Hæ pustulæ si intensum ruborem habeant, gutta rosacea vocantur, si duræ et exiguæ ex frigido et crasso humore ac velut in callum concretæ, vari nominantur (Fernel. Universa medicina, fol. 1679, p. 442).

<sup>2</sup> Guy de Chauliac. (Traduction du Guidon, par J. Canappe. 18mo., p. 393.)

<sup>3</sup> Darwin. Zoonomia. Class ii. i. 4, 6.—Class iv. i. 2, 13, 14.

<sup>4</sup> Sennert. Pract. medic. lib. v.; part i. cap. 31.

<sup>5</sup> Baier. Pract. lib. viii. cap. 3. (Schenck. Obs. med. rar., lib. i. p. 194.)

<sup>6</sup> Zacutus Lusitanus. Medic. nat. hist., lib. v. obs. 3.—Lorry. De morb. Cutan., p. 653.

<sup>7</sup> Turner. Of the red face, pustular eruptions. (Treatise of diseases incident to the skin, 8vo., 1736, p. 237.)

<sup>8</sup> Agricola. Comment. in Poppium de sulphure, p. 356.

<sup>9</sup> Gondret. Journ. complém. des sc. méd., i. xxxix. p. 42.

<sup>10</sup> Klein. Interpres clinicus Frangof ad Moen. 1753, 8vo.

<sup>1</sup> De la Goutte-rose, liv. xxvi. chap. xlv.



practice adopted was crowned with the most complete success. I beg to say, however, that the remedy employed by this celebrated surgeon has been too much vaunted, and, as I have said, few patients will be found ready to hazard its adoption.

CASE LXXV.—*Slight and recent rosacea, hypertrophy of the left ventricle of the heart; treatment by means of blood-letting and mercurialized spirituous lotions.*—Mam'le \* \* \*, nineteen years of age, has been subjected to violent palpitation of the heart for the last five or six years, which recurs as often as she takes active exercise, or is exposed to any moral affection. The pulse is regular, but hard and full. The impulse of the heart is strong. Respiration is unembarrassed; the other functions, and particularly the menstrual flux, are regular.

Nevertheless Mam'le \* \* \* complains occasionally of heaviness of head; and within four months of the date at which my assistance was required, a slight rosaceous affection had appeared. The eruption consisted of but a small number of isolated rosy pustules accompanied with very little inflammation. The disease was not hereditary, and seemed constantly to improve after the recurrence of the menstrual periods, and after the application of the leeches which had been attached to the feet or the præcordial region with a view to calm or to prevent an attack of palpitation. Several follicles, situated upon the *alæ nasi* and neighbouring parts of the cheeks, are distended with solid sebaceous concretions about a line in length. I prescribed fifteen leeches to the feet, and a wash to be applied three times a day to the face, consisting of two parts of rose-water and one of alcohol. This lotion appearing scarcely to stimulate the pustules in any degree, I ordered nine grains of the bi-chloride of mercury to be added to eight ounces of the mixture, a few days afterwards. At the end of a fortnight, the whole of the old pustules were gone and no new ones had been formed. The wash was continued for a fortnight longer. From this period a few pustules of rosacea had been from time to time developed on the face, but the progress of the disease has always been arrested by the application of leeches, a measure which the affection of the heart rendered repeatedly necessary, and by the pains which the patient always took to attack and modify the course of the nascent eruption by the use of the wash I had prescribed for her.

CASE LXXVI.—*Rosacea successfully treated by blood-letting, and the hydro-sulphureous douche.*—Madame \* \* \*, thirty-four years of age, had never suffered from any chronic affection of the skin, when, after long-continued and violent grief, she was attacked at the end of the month of January, 1825, with a number of small red spots which appeared upon the nose and neighbouring parts of the cheeks, and before long became surmounted by small pointed pustules, the apices of which were filled with a whitish or yellow-coloured purulent fluid. This eruption left to itself made rather rapid progress. By the 12th of April the pustules were thickly set, and had spread over the nose and regions of the cheek-bones, the integuments of which were, besides, erythematous and flushed. At this period the patient was seized with a gastro-intestinal inflammation which, in spite of the most active treatment, continued for eight and twenty days. During the continuance of this disease, and under the influence of the depletory measures that were enforced, the rosacea got almost completely well. The eruption reappeared, however, gradually, shortly after the convalescence of the patient, and within two months, had regained the same degree of severity it possessed before the occurrence of the gastro-intestinal affection. Propitious circumstances had again restored to Madame \* \* \* means of leading a quiet and agreeable life; the general health of the patient was good; the chances seemed peculiarly favourable for the treatment of the rosacea, and measures were accordingly taken on the 6th of July, 1825.

The patient was bled from the foot to the extent of twelve ounces; the bowels, habitually constipated, were regularly moved by the daily use of emollient glysters; the patient drank two glasses of whey every day, bathed the affected parts night and morning with cow's milk, and every second day took a warm bath at 25° of Reaumur. Naturally inclined to the most temperate and regular system of life, the patient was anxious to make it still more rigorous, and took particular pains to avoid whatever might by possibility interfere with the success of the treatment.

Its good effects were at first very marked: within two weeks the

erythematous spots which formerly overspread the cheeks had faded; the pustules had shrunk or dried up, and the pruritus, of which the affected parts were the seat, was completely subdued.

The same plan of treatment was continued for two months without other interruption than such as the recurrence of the menstrual periods rendered necessary, and without any other modification than the application of sixteen leeches to the temples. During this interval of time, the efflorescence of the cheeks and *alæ nasi* revived oftener than once without assignable cause; fresh pustules were also evolved; but they were few in number, and speedily dried off. A fortnight later the integuments of the nose were still affected with some degree of redness, and slight desquamation. Madame \* \* \* now took fifteen hydro-sulphureous douches, the steam being directed upon the parts affected by means of a properly constructed spout, with the greatest benefit. From this time, indeed, the rosacea might be regarded as completely cured. When the patient has any sensations of itching in the *alæ nasi* similar to those that preceded the development of the rosaceous pustules in the first instance, by bathing the parts with the mercurial and spirituous wash recommended in the preceding case, (LXXV.) this symptom is appeased, and the formation of fresh pustules prevented.

CASE LXXVII.—*Rosacea treated and cured by the application of a blister to the face.*<sup>1</sup> A certain gentlewoman came to Paris, her whole face deformed with fiery pustules to such a degree that she was shunned by many as affected with leprosy, and being even interdicted from entering her parish church, lest she should infect the healthy. Calling Jacques Hollier and R. Gruaume, physicians, and Est. de la Riviere and Germ. Cheval, surgeons, to take her case into their consideration, it was determined that she was by no means affected with leprosy; and to cure her of her *couperose*, a blister of cantharides was ordered to be applied to the whole of the face. This I accordingly did. And three or four hours after the blister began to tell, she had an extraordinary sense of scalding in the bladder, with gripings, &c., so that she vomited, and made water, and went to stool incessantly, tossing herself hither and thither as if she had been in a fire, and out of her mind from the delirium of a fever, all of which surprised me very much. Seeing that these accidents arose from the cantharides, it was resolved, in consultation, to give the patient abundance of milk to drink, and that injections should be thrown up as well to the neck of the womb as to the neck of the bladder. She was also bathed in water of moderate heat, in which linseed had been boiled, together with the roots and leaves of mallows, henbane, lettuce, &c. In this bath she remained long, finding her sufferings lessened by it. Being then laid in bed again, her loins and genitals were anointed with unguentum rosatum and oxycerate. By these different measures the accidents were all subdued. As to the face, it was completely blistered, and discharged large quantities of purulent sanies, by which it lost the great deformity of skin it presented before. After being cured, we gave the patient a certificate to the effect that she was in no wise leprous. And soon after, having returned home, she got married, and has since had several beautiful children; nor could any one now perceive, for she is still alive, that she had ever had her face flayed.

## SYCOSIS.

Vocab. *Mentagra*, *Whelk*.

519. Sycosis is characterized by the successive evolution of a number of small pointed pustules, similar to those of rosacea, and scattered singly or clustered together, over the chin, upper-lip, sub-maxillary region and lateral parts of the face. This eruption is pretty generally known under the objectionable title of *mentagra*.

520. *Symptoms.*—Slight, partial, and passing pustular eruptions are usually observed to take place for several months, or even some years, upon the regions indicated, before a complete attack of sycosis occurs. In some rare cases, and almost always under the influence of appreciable causes, such as excesses in spirituous potations, the disease unexpectedly attacks the whole of the inferior maxillary region.

<sup>1</sup> Amb. Paré Œuvres. liv. 21. Des Venins, fol. Lyon, 1641, p. 500.



The eruption is occasionally confined to the upper-lip, at other times to one of the sides of the chin, to the lateral parts of the face, or to a part only of the sub-maxillary region; the disease in other instances attacks the whole of the regions indicated above, simultaneously or successively, and even extends to the roots of the hair in the nape of the neck (*sycosis capillitii*).

The evolution of the pustules of sycosis is usually attended with a feeling of heat and tension in the parts they are to occupy. At one time they are disseminated and appear under the form of very small red points which become more and more prominent by degrees. On the second or third day of their formation the tops of these elevations grow white, and are filled with a pale yellowish pus; they subsequently increase a little, but it is seldom that they surpass a millet-seed in size. Almost all of them seem traversed by a hair; they do not discharge like those of impetigo. Between the fifth and seventh day each pustule bursts spontaneously, its sides shrink, and a slight oozing takes place which gives rise to a brownish crust that scarcely adheres to the skin, and is confounded at its edges with the epidemic furfuræ which are thrown off by the inflamed integuments in the vicinity of the pustule. (a)

521. When the pustules are grouped or clustered in considerable numbers, the inflammation extends to the cellular membrane immediately under the inflamed portion of corion, and gives rise to a true phlegmonous swelling. The chin, the sub-maxillary regions and the upper lip then present small hard, painful red tumours covered with pustules, or incrustations of considerable thickness, and a mixed yellow and greenish-brown hue, which might very readily be mistaken for those of impetigo, without attention to the thickening of the integuments and swelling of the subcutaneous cellular tissue.

In the greater number of cases, sycosis, like rosacea, invades in the shape of repeated partial eruptions which succeed each other at intervals more or less remote. When the pustules are thrown out repeatedly on the same places, the inflammation extending from the corion to the subcutaneous cellular membrane, there occasions indurations, which before long present the appearance of voluminous tubercles. These are especially observed among the aged, and in subjects of a flabby constitution in whom the pustular inflammation has not been followed by a perfect resolution. When the eruptions have been copious and severe, and have succeeded each other rapidly, these tubercles increase in number, and spread over the whole extent of the chin. The new pustules which still continue to be evolved on the surface of these tubercles, or in the intervals between them, proclaim the original nature of the disease. It is then particularly that the confused mixture of pustules, tubercles, and incrustations, give a disgusting character to the appearance of sycosis. Arrived at this stage, sycosis is always an obstinate disease, the cure of which is never obtained but with great difficulty.

The skin occasionally becomes very much altered, and swells to such a pitch as to appear covered with moist and vegetating tumours. The piliferous bulbs of the beard frequently participate in the inflammation; and if the disease continue long enough, patches of the integument of the chin, &c., are divested of beard entirely. This loss of the beard is usually only temporary; at a subsequent period, new hairs, of a light colour and very weak at first, make their appearance, but gradually acquire the shade and strength of those that have fallen. The loss of portions of the beard in other instances is permanent.

Sycosis may be confined to the upper lip. Several pustules agglomerated upon this part give rise to a thick blackish scab, which often projects remarkably from the surface of the parts it covers.

When the disease gets well, whether by a natural process, which very rarely happens, or under the influence of remedial measures, no new pustules are evolved, the incrustations are detached, and the tubercles decline in size and hardness. Some slight desquamation

(a) "What has been termed sycosis, is nothing more or less than acne, or follicular obstruction and its consequences, occurring in parts covered by hair; and though the necessity of distinction between it and the same state of parts not so covered be admitted, this circumstance cannot justify a subdivision like that adopted of *S. menti* and *S. capillitii*," Plumbé. The reference here is to the division of sycosis into two species by Willan and Bateman.

occasionally takes place from the points formerly affected, which long continue red and livid, especially in individuals of broken-down constitutions.

The shortest period that sycosis is known to continue is from one to two months; it frequently remains for years, and in spite of the most rational methods of treatment that can be adopted. It is further very apt to recur even after it has been cured, particularly in those individuals who commit errors in diet.

522. *Causes*.—I do not imagine that sycosis is contagious: yet M. Foville assures us that he has seen several of the insane patients in the Hospital of Rouen, successively attacked with the disease from having been shaved with the same razor. Under certain circumstances consequently it would appear that sycosis may acquire the contagious character. Pliny tells us that mentagra spread in Italy by contagion during the reign of Claudius. Was this the same disease as sycosis? The disease makes its attacks more especially among youthful and adult male subjects of a sanguine or bilious temperament, who have a strong thick beard; it is, however, occasionally observed among the aged; it then occurs more particularly among those who have been habitually exposed to strong heats, such as cooks, founders, refiners, &c. Indulgence in the luxuries of the table, the abuse of spirituous liquors and highly-seasoned food, want of due regard to cleanliness, irritating applications to the skin of the face, the use of a foul or rough-edged razor, seem all to favour the development of the disease. It appears more frequently in the spring and autumn than at other seasons. It is rare among females. (a)

523. *Diagnosis*.—It is of some importance to distinguish sycosis

(a) In some instances an analogous affection to sycosis is met with in the pubes of both sexes.

A variety of the disease, termed by M. Gruby *mentagrophyte*, is described as follows by Mr. Wilson (*op. cit.* pp. 301-2).

"*Sycosis contagiosum*.—M. Gruby, of Vienna, who has recently distinguished himself by his researches into the vegetable nature of favus, and by the announcement of the discovery of vegetable formations in other diseases, has just (September, 1842) addressed a paper to the Academy of France, on a new cryptogamic plant, existing in the roots of the hairs of the beard, and around that portion which is contained within the hair-follicle. By the transmission of the seeds of this plant the disease is rendered contagious, and he proposes for it the name of *mentagrophyte*.

"M. Gruby gives the following account of the disease:—It is limited to the hairy part of the face, but is most frequently seen upon the chin, the upper lip, and the cheeks. It covers all these parts with white, grayish, and yellowish scales, which measure from two to six millimetres in breadth, and from three to eight in length. The scales are slightly raised in the middle, their borders are angular, and they are pierced at all points by hairs; they are but loosely connected with the skin, but so closely with the hairs, that in removing a scale we at the same time pull out a hair.

"Examination with the microscope discovers to us that the scales are composed of epidermic cells, but the whole of the dermic portion of the hair is surrounded by cryptogamic formations, which constitute a vegetable sheath around it, in such manner, that the hair implanted in this vegetable sheath may be likened to the finger surrounded by a glove.

"It is worthy of remark, that these cryptogamia never rise above the surface of the epidermis; they originate in the matrix of the hair, and in the cells of which the follicle is composed, and they ascend so as to surround all that portion of the hair included within the dermis. They present everywhere a prodigious number of sporules, which are adherent on the one side with the internal surface of the follicle, and on the other, with the cylinder of the hair; to the former they are very closely connected.

"Each plant is composed of a stem, of several branches, and of sporules.

"This disease of the skin, continues M. Gruby, is an affection of a purely vegetable nature, and is deserving of occupying a place among those disorders—such as favus and aphtha—which consist in the development of parasitic plants, and which might, very properly, be termed *nosophyta*."



from other inflammatory affections appearing on the chin, cheeks and lips, especially from ecthyma, impetigo *figurata*, pustular and tubercular syphilitic eruptions, and boils.

The pustules of ecthyma are larger and more highly inflamed than those of sycosis. The scabs succeeding ecthyma are also broader, thicker, and more adherent, and this disease never gives rise to tubercular indurations.

The small pustules of impetigo *figurata* scarcely rise above the level of the skin, and are not pointed like those of sycosis; they also differ from the latter in the greater rapidity of their evolution, and the more acute symptoms attending their progress. As regards the disposition of the pustules in *groups*, both of these eruptions may present this arrangement. Nevertheless, in sycosis the pustules are most commonly isolated and distinct, whilst in impetigo *figurata* they are generally clustered and crowded together. The pustules of the impetigo burst from the third to the fourth day, and the sero-purulent fluid that escapes from them is quickly changed into yellow continuous incrustations, the thickness of which increases in the course of a few days. The pustules of sycosis again do not give way before the fifth, sixth, or seventh day, and the scabs that succeed them are thin, slight, and isolated. All these distinguishing features, however, are obscured when the pustular eruption of sycosis is considerable and accompanied with a pale yellowish-green secretion from the follicles, or when the course of the disease is very acute, and the pustules are confluent, or much crowded together.

It is rare that the pustules of syphilis appear nowhere except on the lower part of the face; they almost uniformly occur on the *alæ* of the nose, on the forehead, and at the angles of the mouth. The pustules of sycosis, on the contrary, are often limited to the chin, and, indeed generally, to its inferior parts; they are pointed, and arise on a bright red base, proclamatatory of one of the more acute forms of inflammation. Syphilitic pustules are flatter, spring from a coppery, dirty, and almost flabby ground; they are not preceded either by the smarting or painful tensive feeling which announces the pustules of sycosis. In the tubercular state, sycosis might more readily be confounded with the same condition of the integuments proceeding from a syphilitic cause. Nevertheless, the tubercles of sycosis are conoidal in their form; their base penetrates more deeply than the corion, extending even to the subcutaneous cellular substance; whilst those of syphilis are more rounded in their shapes, have a shining look, and appear to arise from the more superficial layers of the corion; they are, farther, primary formations, and not consecutive to pustules like those of sycosis. Moreover, the pustular and tubercular inflammations of the skin induced by syphilis, accompanied as they are, in the vast majority of cases, by chronic phlegmasiæ of the throat and conjunctiva, and almost invariably preceded by severe nocturnal pains, present a group of symptoms that differ extremely from those that characterize sycosis.

In furuncle the inflammation extends from the cellular tissue to the skin; a sloughy core is expelled from an opening which always leaves a scar. In sycosis, on the contrary, the inflammation first attacks the follicles; and the pustules only discharge a very small quantity of pus, by an opening which does not destructively implicate the skin, and which is speedily effaced.

524. *Prognosis*.—The most experienced practitioner frequently finds it impossible for him to fix limits to the probable continuance of sycosis. At the very moment when the decrease in the number of the pustules, and in the violet hue of the skin, seems to promise a speedy recovery, fresh eruptions break forth without any assignable cause, and blight the expectations of the patient and his attendant. In other cases, again, when every appearance leads to the presumption that the disease will continue for years, it is found to yield readily to active measures combined with an appropriate system of regimen. Those cases of the disease generally prove most rebellious which in the chronic state preserve the pustular and primitive form of the inflammation. When this happens, the disease is justly to be regarded as one of the most intractable to which the integuments are subject.

Sycosis occasionally disappears in summer, commonly to return again in winter.

525. *Treatment*.—The first measure in the treatment of sycosis is to

clip the beard with curved scissors, the action of the razor being found constantly to aggravate the disease.

If the disease be of recent date, and have attacked a strong and healthy man, if the pustules be numerous, and crowded in such a way as to indicate a great degree of acuteness in the inflammation, it will be proper to have recourse to blood-letting, general as well as local, and to repeat the operation at frequent intervals, being only careful to apply the leeches, used topically, to a portion of the integuments beyond the limits of the eruption. If the disease continues unchanged, or if it revives after having once declined, the general abstraction of blood ought to be repeated, the operation being occasionally preceded by fresh applications of leeches around the chin. The measure in which blood is abstracted both locally and generally, is in every case to be regulated by the state of the constitution, the intensity of the inflammation, the extent and frequency of the pustular eruptions, and by the effects—beneficial or noxious, which the depletion exerts upon the general health.

General baths and local emollient fomentations are to be employed at the same time, and a mild aperient is to be exhibited at intervals.

When the disease has existed long, and repeated pustular eruptions have given place to a tuberculated and indurated state of the integuments, the local abstraction of blood will still be found useful; under such circumstances, however, the measure is to be resorted to at more distant intervals, and only in the robust and plethoric. It would be hurtful in individuals advanced in life, and of weakly constitution and lax fibre.

When the tubercles of sycosis show no signs of resolution under the influence of emollient topical applications, continued during several weeks, we should then cause the parts affected to be well rubbed with some discutient salve of which the proto-nitrate, the deutoxide, or the protochloride of mercury forms the base. Ointments of the preparations of sulphur, of iodine and of the alkalies, are also frequently employed with the same views. I have occasionally obtained the rapid resolution of the tubercles of sycosis by the inunction of the ointment of the hydriodate of potash and sulphur. It is always proper to suspend the use of this class of remedies for a season, upon the first appearance of a fresh crop of pustules.

The vapour douche is also frequently employed with success in softening the tubercles of sycosis and promoting their resolution. Douches from a watering spout, of the sulphureous waters of Barèges, Cauterets, Aix in Savoy, Bath, Harrowgate, &c., are often found serviceable under the same circumstances.

Among topical applications, in fine, and when the disease is of very old standing and has proved very rebellious, much good is occasionally effected by the employment of superficial escharotics. The concentrated mineral acids, or solutions of the caustic potash have generally been the agents selected. (a)

*Laxatives* are often employed successfully in the treatment of chronic sycosis occurring among the young and robust. *Bitters* and *chalybeate* medicines are found to answer better with individuals in the decline of life, and of a lax and flabby constitution.

The *muriate of gold*, administered by way of inunction upon the gums and tongue, has repeatedly either accomplished or expedited the cure of very refractory cases of sycosis.

Lastly, excellent effects are occasionally obtained from the preparations of *mercury*, as well among those who have never, as among those

(a) On this division of the treatment Plumbe remarks: "The attention to the part should be constant and unremitting, and should consist of warm fomentations frequently repeated during the day, with poultices, if they can be conveniently applied, at night. Every little tubercle should be punctured at its commencement, and every hair extracted from the part which may be got out without much pain. This practice, strictly followed, is capable of removing the most protracted and troublesome cases, without the use of any internal medicines beyond alterative aperients, and any dependence on internal remedies, unassisted by it, will inevitably lead to disappointment."—p. 67.

He recommends as a comfortable and clean substitute for the razor, the razor-scissors, as they are called by cutlers who manufacture them.



who have previously suffered from venereal affections. It frequently happens that we are compelled to try the effects one after another of the whole circle of remedies that have now been mentioned, the disease, as has been said, commonly proving one of extreme obstinacy. (a)

#### *Historical Notices and particular Cases.*

Celsus,<sup>1</sup> Ætius,<sup>2</sup> and Paul of Ægina,<sup>3</sup> have described two varieties of sycosis, one of which evidently agrees with the eruption which has just engaged our attention. Pliny<sup>4</sup> has drawn a striking and accurate picture of the disease under the title of *mentagra*, which he believed contagious. The term sycosis (from *συκωρ*, a fig), only signifies one, namely, the tubercular state of the disease; the word *mentagra*, however, is even more objectionable, inasmuch as it is applicable to any or the whole of the eruptions which affect the chin, and could not be used to designate sycosis affecting the upper lip alone.

Willan, Bateman, and their followers, have done wrong in classing sycosis among the *tubercles*.

I have not been able to meet with the dissertation of Johrenius,<sup>5</sup> who has written expressly on this disease. Alibert has described the affection under the title of *dartre pustuleuse mentagra*. Several cases of sycosis have been particularly detailed in different periodical publications.<sup>6</sup>

CASE LXXVIII.—*Sycosis successfully treated by blood-letting, emollient fumigations and an ointment of the nitrate of mercury.*—A carrier, 38 years of age, of a vigorous constitution, and leading a laborious life, although passionately addicted to spirituous liquors, was attacked with sycosis in the beginning of May, 1825. I was consulted towards the end of July of the same year, and found the eruption to consist, 1st, of a great number of small sharp-pointed pustules, the size of a millet-seed, with hard and inflamed bases, disseminated over the chin, the inferior maxillary region, and the lateral and superior parts of the cheeks; 2d, of some ten red, hard, and inflamed tubercles; 3d, of epidermic laminæ and yellowish crusts, confusedly intermingled with the pustules and tubercles, and adherent to a strong black beard. These parts had long been the seat of painful, tensile sensations and violent pruritus. The symptoms had at one time abated; but, in consequence of several successive eruptions of pustules, the disease had lately gone great lengths, and the whole integuments of the chin seemed swollen. Several lymphatic glands situated under the mastoid processes were enlarged; the principal functions of the body were performed with perfect regularity.

I began by bleeding the patient to the extent of several ounces, and ordered cataplasms of crumb of bread, softened with the decoction of mallows and poppy-heads, to be applied to the parts of the skin affected. The patient took a pint of whey daily, with a drachm of soluble cream of tartar dissolved in it. A speedy improvement was the consequence of this practice. Twelve days afterwards, I had twenty leeches applied to the fore part of the neck, at some short distance from the limits of the eruption. The soothing cataplasms were continued, and emollient and anodyne fumigations were four times administered.

On the twentieth day of this treatment, the skin freed from incrustations and squamæ, no longer showed any pustules; but it was erythematous in some places, and very little change was found to have taken place in the forms and dimensions of the tubercles. I now desired the poultices to be discontinued, and soothing fumigations, and lotions with warm milk to be used in their stead. The beard was removed with curved scissors. On the forty-fourth day of the treatment, the tubercles appeared softer; but the skin was still furfuraceous in places where the tubercles had been evolved. The

patient was purged with Seidlitz water, and the tubercles were gently anointed with an ointment of the nitrate of mercury, the strength of the unguent being gradually increased by an additional dose of the salt. The cure of the disease, in this instance, was accomplished after two months and a half of treatment.

CASE LXXIX.—*Pustular and tubercular sycosis, application of emollients and of the ammoniacal proto-chloruret of mercury.*—N \* \* \* \*, corpulent, and of a lymphatic constitution, was attacked, in the course of 1815, with slight rosacea, which yielded to sulphureous washes. In the month of March, 1824, several pustules, similar to those which formerly appeared on the cheeks, were observed on the chin, and got well in the course of ten weeks, under the use of the same kind of lotions. A second eruption of small pointed pustules took place in the month of September following, not only on the chin, but on the inferior maxillary region likewise, which became covered with thin and slightly adherent incrustations; fresh pustules made their appearance in the intervals between these, and the sulphureous washes, usually employed by the patient with the best effects, seemed now to aggravate the mischief: the skin became more tense, more highly inflamed, and more thickly beset with pustules than ever.

Consulted on the 14th of October, 1825, for the first time, I found but few pustules unbroken; the greater number were covered with dry scabs, retained by being entangled among the hairs of the beard. Several tubercles were disseminated amidst these incrustations, the level of which they exceeded. The skin was of a red colour under the scabs, especially in the neighbourhood of the tubercles. The patient made little complaint of heat or itchiness; and the affection of the skin seemed perfectly free from all complication. The scabs were soon detached and the tubercles softened by the application of emollient poultices. Small doses of calomel were at the same time prescribed internally. Eight days afterwards the only evident change in the state of the parts was their freedom from incrustations. The limits which the redness of the skin and the tubercles extended could now be more clearly perceived. The emollient topical applications, and the calomel internally, in doses of three grains daily, were nevertheless continued; but without any other effect, at the end of three weeks, than a decrease, in a very trifling degree, of the redness of those places which had been beset with pustules. The skin was soft and not painful; the chin was now repeatedly exposed, for several successive days, to the vapour of an emollient decoction; no fresh pustules were evolved. During the space of a month, N \* \* \* \* continued to rub the tubercles gently with an ointment of the ammoniacal proto-chloruret of mercury, the use of this salve being suspended whenever it appeared to be producing too great a degree of excitement. By this means the resolution of several of the small tumours was successfully accomplished. Some others, however, remain indolent, and the skin which surrounded them long continued furfuraceous, although it did gradually resume its natural appearance. Six weeks after the treatment now specified was entered on, with the exception of only four or five tubercles, the resolution of which could not be brought about, the integuments of the chin had returned to the condition they possessed before the invasion of the disease.

CASE LXXX.—*Pustular sycosis in clusters; tubercles; cure accomplished by means of bathing, bleeding, purgatives, and sulphureous and vapour-baths.*—Thomas, aged fifty-one, entered La Charité on the 10th of June, 1833, on account of sycosis. The patient is a sturdy vine-dresser, in the habitual enjoyment of good health. He lives well, and every day indulges in a small glass of brandy, never drinking unmixed wine save on Sundays and festivals.

The sycosis was of but a few days' standing, having been preceded by a considerable degree of itchiness, followed by sensations of pricking over the chin and region of the lower jaw. These parts, twenty-four hours after the attack, were puffed, and beset with numbers of small tumours surmounted by pustules.

June 11th.—On the lower maxillary region, numerous small, hard and prominent lumps of a deep red colour are observed. These implicate the whole thickness of the integuments, and even extend to the subjacent cellular tissue, which participates, over a very considerable space, in the inflammation of the skin. The tumours, which vary from the size of a pea to that of a large filbert, cause no sensation of itchiness, but one of tensile, pricking and pulsatory pain.

(a) *Special diseases of the sebaceous follicles* are treated of by M. Rayer at § 1183 et seq.

<sup>1</sup> Celsus. De re medicâ, lib. vi. cap. 3.

<sup>2</sup> Ætius. Tetrab. I. Sermon. 5, cap. 80, 190.

<sup>3</sup> Pauli Æginetæ, lib. iii. cap. 22.

<sup>4</sup> Plinii secundi natur. Historiæ libri, xxxvii. Venet. 1569. Folio, lib. xxvi. cap. i. n. 4.

<sup>5</sup> Johrenius (Cl.). Diss. de mentagra, 4to. Francof. ad Viadrum, 1662.

<sup>6</sup> Edinb. Med. and Surg. Journal, vol. xiii. p. 64.—Journ. Hebdomadaire, t. iv. p. 79.—Revue Médic., Juin. 1830, p. 347.—Journal complémentaire des sciences médicales, t. xxxix. p. 39.



Several of the tubercles are covered with dry, gray or yellowish-coloured, and, in some instances, cracked incrustations, which are entangled among the hairs of the beard. The general health is unimpaired, and Thomas makes no complaint besides the sycosis, except of an occasional slight headache. The patient was bled, took the temperate bath, and was put upon the use of whey. June 13th.—There was less uneasiness in the parts of the skin affected; and the headache had left him. (*Softening poultices to the chin.*) 14th—20th June.—Matters much in the same state, although the patient had been purged with castor oil, and a few of the tubercles were lightly touched with the nitrate of silver; several fresh tubercles, indeed, having appeared about the latter date, the patient was bled a second time, and the purgative repeated. These measures were followed by a diminution in the prickling and tension of the affected parts; and when the superficial eschars, produced by the caustic, were detached, the tubercles beneath them were found evidently shrunk, and showed no disposition again to become covered with crusts. In the same measure, however, as these older tubercles declined, others of more recent formation appeared in their vicinity, being constantly preceded by tumefaction of the subcutaneous cellular substance: wherever they were about to be evolved a red spot was apparent on the skin; and at the time of these getting covered with pustules, the subcutaneous cellular substance became hard and swollen.

A calomel and jalap purge was exhibited on the 23d and 26th, and on the 25th the patient was bled a third time. On the 28th he felt himself better; but fresh tubercles still continued to make their appearance.

On the first days of July a discharge of a yellow colour took place over the chin; not, however, from the tubercles themselves, but from the spaces between them, which, by concreting, formed incrustations of the same hue. These scabs were rounded and conical, of no great size, somewhat transparent, and very like pieces of amber in their general appearance. This discharge, of a strikingly impetiginous character, did not continue longer than a few days, and never occurred again.

From the 1st to the 13th of July, the warm bath, whey and aluminous lotions were continued, but without any good effect. On the 17th the inflammation had lost so much of its acute character, that the sulphureous was substituted for the simple bath. During the month of July the patient was farther let blood, three several times, and took active purgative medicine as often. From the 2d to the 9th of August, when the patient left the hospital, the vapour bath was tried every day, in the hope of hastening the progress of several stationary tubercles. The skin had now resumed its natural appearance in many places; no fresh eruption of pustules had taken place for some time; but the thickened portions of the subcutaneous genal and submaxillary cellular tissue were not yet completely resolved. The patient was seen, several weeks after his exit from the hospital, perfectly recovered, having taken no farther steps towards remedying his disease, save such as are usually included under the head of diet and regimen.

## IMPETIGO.

Vocab. *Crusted Tetter, Psudraccia.*

527. Impetigo is a cutaneous affection unaccompanied by fever, characterized by the eruption of one or more crops of pustules, disseminated or collected in clusters, the contents of which dry up before long, and assume the form of yellowish rough and prominent incrustations.

528. *Symptoms.*—Impetigo is a disease that may invade every part of the body. It appears under two principal forms: the small pustules that characterize it being in the one disposed in circular or oval groups (impetigo *figurata*, Willan); in the other disseminated over a surface of variable extent (impetigo *sparsa*, Willan).

Each of these forms of the disease is acute or chronic, according as it consists in a single crop or in successive eruptions of pustules. Between these two principal forms of impetigo specified above, there occur a vast number of intermediate varieties, which are not unfre-

quently observed in the same individual when the disease appears on several regions of the body.

529. Impetigo *figurata*, the *dartre crustacée flavescence* of Alibert, most frequently attacks children at the period of dentition, youths of either sex, and women of a lymphatic and sanguineous temperament, with a florid complexion and a fine skin. It very commonly appears in the spring; and I have seen several young persons attacked periodically at this season for three or four years in succession.

It usually occurs without precursory symptoms. When acute, however, it is occasionally preceded by pain of the epigastrium, general uneasiness, a feeling of lassitude, weakness in the limbs, &c.

The disease is observed on the neck, trunk and extremities, but even more frequently on the face, and almost always on the middle of the cheeks; from thence it is apt to spread to the whole of the malar region, and to the commissure of the lips in such a way as to form a circle upon the face.

When impetigo *figurata* is evolved on the face, and it is watched from the period of its invasion, one or more small red and very superficial blotches are first perceived; these gradually become more conspicuous, and are soon affected with a considerable degree of pruritus. By and by these patches rise and become covered with small yellowish pustules, confluent or agglomerated, and but little elevated above the general level of the integuments. These clusters, of various dimensions, generally of a circular shape, and surrounded by a rosy circle, may continue isolated, or become connected by the development of fresh pustules in their circumference, or by the skin acquiring an erysipelatous tint in the spaces between them. The eruption is occasionally accompanied with severe pruritus and a degree of heat and tingling that amounts to smarting.

After the lapse of three or four days, and occasionally sooner, the pustules burst, pour out a yellowish fluid which dries quickly and turns into thick crusts of a bright or greenish yellow colour, semi-transparent, slightly furrowed, very friable, and in appearance very similar to portions of candied honey, or to the concrete gummy exudations poured out by different trees. A considerable discharge continues to go on under the crusts originally formed, the thickness of which is thus gradually very much increased, whilst their dimensions extend greatly beyond the limits of the pustules that first produced them. The skin in the circumference of the incrustations is red, and frequently presents several small and unbroken pustules the contents of which are scarcely consistent. The integuments under these crusts are of a bright red, and occasionally appear denuded of epidermis.

When impetigo *figurata* is evolved in a young and well-constituted individual, or when the disease is slight, its duration is not necessarily protracted beyond an interval of more than three or four weeks: the heat of the skin gradually abates, the morbid secretion lessens by slow degrees, and before long ceases entirely; the incrustations grow constantly drier, and being detached at length, leave one or more red spots or marks which commonly continue visible for more than a month, and are followed or not, according to circumstances, with a sensible desquamation of the cuticle. Small miliary specks, of a dull white colour, are at times observed upon the remaining red spots; these are owing to a number of sebaceous follicles distended with hardened secretions, or of which the walls have become altered and thickened.

530. Impetigo *figurata* is occasionally met with confined to the eyelids, upon which prominent and conical-shaped incrustations are then produced. This variety of the disease is commonly complicated with a particular species of ophthalmia, or with an inflammatory affection of the follicles of the ciliae.

I have seen this form of impetigo prolonged downwards on either side of the under lip in a very regular manner; and I have remarked it forming a streak upon the upper lip so as to appear like a pair of thick moustaches.

Impetigo *figurata* of the face may become chronic under two forms: 1st, the development of the psudracious pustules is at one time successive; fresh groups are thrown out in the neighbourhood of the yellowish crusts produced by the desiccation of the primary pustules or of the secondary crops developed in the circumference of the first pustular or incrustated clusters, the dimensions of which they



increase. In the latter case, the desiccation and cure commence in the centres of the several groups.

2d. Instead of spreading superficially, the inflammation in impetigo may penetrate the whole thickness of the skin, and even affect the subcutaneous cellular tissue. After the detachment of the incrustations, a fresh discharge may give rise to the formation of new scabs of the same kind; and they may thus fall and be reproduced several times in succession, becoming, however, thinner and thinner on each renewal. The surface of the integuments under them is of a vivid red colour; it subsequently becomes furfuraceous, and the inflammation then seems to acquire something of a squamous character.

When chronic impetigo *figurata* thus approaches its decline, if it be treated by an ill-timed recurrence to stimulants, or if the constitution happens to suffer from any cause, the disease may be fastened, as it were, upon the skin for many months, and even for several years. The parts of the skin that have in this way been repeatedly affected with inflammation, become chapped, and occasionally even present superficial excoriations.

531. The pustular groups of impetigo *figurata* of the face, although usually situated on the malar regions, may be observed occurring in other regions: they are occasionally thrown out on the upper lip, immediately below the septum of the nostrils, and upon the *alæ nasi*. In the latter case, the matter of the pustules may dry in such a way as to produce a conical depending scab, compared by Alibert to the stalactitic formations observed in certain caverns (*Dartre crustacée salactiforme*).

In impetigo *figurata* of the limbs, the groups of psyracious pustules, and the scabs that succeed them, usually circular on the forearms and hands, are of a larger size and less regularly round shape on the lower extremities. The pustules in these situations are evolved in the same manner as on the face, and are soon replaced by thick crusts of a greenish or brownish-yellow colour. When the disease has declined into the chronic state, it frequently happens that no untouched pustule is anywhere to be seen; but the partial eruptions that take place from time to time, and the particular shape of the crusts and of the red marks they leave behind them, is sufficient at any time to characterize this variety.

When recovery takes place, the heat and itehiness of the skin diminish; the discharge becomes less in quantity; the crusts, last produced, are of superior thickness, their edges dry completely, and are occasionally marked out by a white epidermic border. Lastly, after the crusts have been detached, and are no longer reproduced, the skin, of a deep red in the first instance, becomes furfuraceous, and by slow degrees regains its natural colour and appearance.

532. Instead of being arranged in circumscribed groups, the pustules and crusts of impetigo may appear irregularly scattered over the limbs, neck, shoulders, face, and external ears. This constitutes the second variety of the disease—the impetigo *sparsa*.

1. Impetigo *sparsa* of the lower limbs is always a disease of long duration. One of the extremities may be attacked singly, or both may be implicated together, or in succession.

The disease is characterized by small yellowish pustules which appear on the instep, ankles, and especially, on the outer part of the leg. The evolution of these pustules is accompanied with insupportable pruritus. They soon burst and pour out a sero-purulent fluid, which is gradually changed into yellow-coloured laminated scabs of less breadth and thickness than those of impetigo *figurata*. In the spaces between them the skin is reddish, and the cuticle looks rough and shining; a considerable discharge takes place from the pustules for some time; but by and by this becomes smaller in quantity, under and in the vicinity of the crusts, which consequently acquire a more consistent and drier appearance. At the very time when they seem about to be thrown off, however, it frequently happens that a fresh eruption of pustules takes place, accompanied with heat and violent pruritus; and secondary pustular eruptions of this description may go on occurring from time to time, at various intervals, until the whole of one, or of both legs, from the knee to the ankle and dorsal aspect of the foot, are implicated. A sero-purulent fluid then flows abundantly from the surface of the skin, and by drying, encases the limbs in crusts. The crusts often acquire a great degree of thickness in the aged, and among individuals of shattered

constitutions. They are then of a deep yellowish-brown colour, and might very properly be compared to the bark of certain trees (impetigo *scabida*, Willan). The legs are moved with pain and difficulty; the incrustations split, the legs frequently become œdematous, and before long are furrowed by fissures, running in various directions, and of different depths. A yellowish, sero-purulent discharge exudes from these cracks, and forms additional incrustations that appear to gird and enclose the leg. If this hardened exudation be removed in part, or completely, by the continued use of emollient fomentations and cataplasms, the denuded corion which is then exposed, speedily furnishes a fresh supply of discharge, which, before long, concretes into a new incrustation.

Arrived at this stage, impetigo *sparsa* of the lower extremities is a very obstinate disease, especially when it attacks the aged, the weakly in constitution, or the infirm and broken down in health. The inflammation occasionally extends to the toes and secreting matrices of the nails. The nails then become altered, and finally loosened from the skin (*onychchia impetiginodes*). An œdematous infiltration of the legs, and ulcers, which commonly appear about the ankle, are common consequences of this affection. The surface of these ulcers is uneven, and discharges a sero-purulent fluid; their edges are irregular, purple, or livid, and frequently crowned with small pustules full of sanguinolent serum, or, otherwise, they are covered with yellowish crusts of varying thicknesses.

When the progress of this inflammation is successfully arrested—the incrustations become dry, and, once detached, are not again reproduced. The skin in some places maintains a bluish, or purple-red tint, and, in others, where it has been attacked with ulceration, it presents reddish or violet-coloured indelible cicatrices.

2. Impetigo *sparsa* of the superior extremities is most frequently found attacking the forearms; it does not differ from the disease situated on the legs save in being less severe, and more rarely complicated with œdema and ulcers when it has advanced into the chronic state.

3. In acute impetigo *sparsa* of the face, the greenish-yellow incrustations dispersed over the cheeks and clinging to the beard in the adult, are not long of being loosened from the skin. If the inflammation extends to the nose, as it frequently does in childhood, the nostrils become plugged up with thick and dry incrustations; the nose swells, and the disease then commonly passes into the chronic state.

4. Impetigo *sparsa* may also attack the neck, ears, and hairy scalp. The tinea *granulata* of Alibert, and the porrigo *favosa* of Willan, signify one and the same variety of impetigo. Impetigo of the hairy scalp is occasionally met with among adults; but the subjects it most usually attacks are children, and then it appears most frequently about the posterior parts of the head, the entire surface of which may be implicated. The disease appears in the shape of minute pustules of a yellowish-white colour, irregularly scattered over the hairy scalp, their centres traversed by a hair, and accompanied with a high degree of inflammation and excessive pruritus. In the course of from two to four days, these pustules pour forth a fluid that frequently agglutinates a number of hairs together, and dries into small brownish, or grayish rough and irregular crusts or masses, which M. Alibert has compared to fragments of roughly pounded mortar. (a) These incrustations, become dry and friable, are detached from the skin, and remain adherent to the hair, which frequently appears filled with them. A very faint, sickly, and unpleasant smell is exhaled from the head, sometimes of so powerful a nature when all attention to cleanliness is neglected, that the whole atmosphere of a room is contaminated with it. Pediculi multiply rapidly, and swarm among the hair, which is rarely lost in this disease, but very frequently matted or agglutinated into masses by the adhesive qualities of the discharge.

Impetigo of the hairy scalp scarcely lasts longer than some months, and it most frequently gets well with proper treatment in the course of a few weeks.

5. Instead of true impetigo, an eruption consisting of the pustules of this disease and of the vesicles of eczema is occasionally observed to take place (*eczema impetiginodes*). This form of the disease, which

(a) And not unfrequently they may be said to resemble a gummy extract.



commonly proves very severe when it attacks the trunk and extremities, frequently appears upon the wrists, spreads over the backs of the hands, the phalanges of the fingers, and even extends to the matrices of the nails; it may also spread in the opposite direction to the forearm, the bend of the arm, and even reach the nucha and face. More than one or two eruptions of pustules and vesicles usually follow each other successively. The vesicles are slower in their progress than the psudracious pustules, and commonly continue transparent for several days after their evolution. Each eruption is attended with much heat and intolerable pruritus; and soon after its appearance, a sero-purulent fluid is discharged in profusion, which speedily concretes and dries into laminated yellowish, or greenish crusts. The skin is red and occasionally chapped. After a longer or shorter interval, the inflammatory symptoms subside; the cuticle is detached in large pieces; the incrustations fall, and the skin is long left in a rough, dry, squamous and rigid state.

I have observed this form of the disease assuming the arrangement into circular clusters presented by impetigo *figurata*. The groups were composed of confluent or very closely crowded vesicles and pustules. When these raised patches were pricked, shortly after their formation, a limpid serous fluid escaped from the vesicles, and an opaque and purulent matter from the pustules. These fluids by drying, formed circular rugous scabs of a greenish-gray colour: the skin which they covered was tuberculated and unequally tumefied. I have, further, seen the oval-shaped clusters of the impetiginous eczemas get well from their centres towards their circumferences, the situations of the patches being at last proclaimed by a very conspicuous crusted and furfuraceous circumscribing ridge. (a)

6. In the last place, impetigo may occur with a very decided inflammatory character. The integument in the circumference of the groups is then of as vivid a red as it presents in erysipelas, (impetigo *erysipelatodes*, Willan,) and this state of things is often accompanied with general febrile symptoms.

533. Various phenomena frequently appear connected with the local symptoms of impetigo: the lymphatic glands in the vicinity of the pustules may become swollen and painful; the pruritus and morbid heat are occasionally so troublesome, that they prevent the approach of sleep, and impede the due performance of different functions of the economy. The disease, in fine, is frequently seen associated with a gastro-intestinal affection; it is much more rarely complicated with any other form of internal lesion.

534. *Causes.* Impetigo is not transmitted by way of infection, and its causes are very obscure. Children at the period of teething, especially those of a lymphatic temperament and scrofulous constitution, are frequently attacked with impetigo of the face and hairy scalp (teigne *granulée* Alib.), or with the eczematous form of the disease, which is then generally entitled *crusta lactea*; this complaint is more especially and frequently observed among the poor, ill-lodged, badly fed, and filthily disposed classes of society.

Young persons of a sanguineous and lymphatic temperament, with a fine and delicate skin, are occasionally attacked with impetigo of the face, when they have been exposed to the bright rays of the sun in the spring and heat of summer.

In young females whose catamenia are irregular, and among women arrived at the critical age, impetigo is apt to show itself either on the face or on the limbs; in these circumstances, it very frequently attacks the upper lip immediately under the septum of the nostrils.

Impetigo seems occasionally to be induced by the presence of some other inflammatory affection of the skin, particularly by repeated attacks of lichen agrius. The disease seems also, occasionally, to coincide with some derangement of the digestive functions; and this is a complication that is met with very frequently in children during the periods of teething. To conclude, the small pustules of impetigo have now and then been observed to follow excesses of every kind, violent muscular exercise, acute and prolonged moral affections, grief, &c.

535. *Diagnosis.*—Impetigo may present itself in the shape or stage of pustules and incrustations; or the disease may be reduced to its

traces—red marks covered with squamæ, or stains of a yellowish-red hue; it may farther be discovered in different places under each of these different degrees or appearances. The minute pustules of impetigo are readily distinguished from the large pustules of ecthyma, and from the artificial pustules produced by the tartrate of antimony and the inoculation of purulent matter. I have already given the elements of the diagnosis between impetigo, and acne and rosacea §§ 507–513. Impetigo of the hairy scalp is not liable to be mistaken for disseminated favus (porrigo *lupinosa*, Willan), nor with that which appears under the form of circular patches (porrigo *scutulata*, Willan). The pustules of impetigo discharge, whilst those of favus, deeply situated within the substance of the skin, are rapidly changed into dry, yellowish-coloured, cup-shaped scabs. The crusts of impetigo are brown, or of a dull gray, like small pieces of dirty plaster, and never present those broad, thick, and continuous incrustations observed in favus confertus (porrigo *scutulata*, Willan). Lastly, impetigo of the hairy scalp is not contagious, and does not implicate the piliferous bulbs, like favus.

It is more difficult to distinguish impetigo of the scalp from eczema *impetiginodes* of the same region. The principal diagnostic features of each of these inhere in the dissimilar aspects of their incrustations.

The pustules of sycosis, often isolated, and always prominent, are larger in size, and not so yellow in colour as those of impetigo when it attacks the chin; the impetiginous eruption, also, is always very much crowded, and secretes abundantly. The scabs of sycosis are drier, and of a deeper colour than the incrustations of impetigo; they are likewise only reproduced after a fresh eruption of pustules. The crusts in impetigo are of a greenish-yellow hue, thick, semi-transparent, and reproduced without any renewal of the eruption. Tubercles and indurations are encountered in sycosis,—alterations that are never seen in impetigo.

When the vesicles of scabies become purulent, or when they are accidentally complicated with pustules, they are always much larger, and more elevated than the small psudracia of impetigo.

The red and scaly spots consecutive to the formation, or to the fall of the crusts of impetigo, may be distinguished from inflammatory affections originally squamous in their nature, such as lepra, psoriasis and pityriasis, by the circumstance of the squamæ in these latter maladies being accompanied by no discharge, and by their having been preceded neither by pustules nor incrustations. Those pigmentary yellowish-coloured spots, so frequently observed after the cure of syphilitic eruptions and confluent psoriasis, are very seldom seen after the invasion of impetigo. The pustules of impetigo can never be mistaken for those of syphilitic origin covered with black, and firmly adherent scabs which conceal ulcers to which indelible cicatrices succeed (vide *Syphilis*). Lastly, impetigo with its pustules, disseminated or collected into clusters, and its thick, rough, and yellowish-coloured incrustations cannot be mistaken for eczema in any of its forms, with its vesicles, its lamellar crusts, or the thicker squamæ of its latter stages.

536. *Prognosis.*—The prognosis in impetigo is generally more favourable than in eczema, lepra, lichen, &c. The disease, with the acute type, wherever situated, commonly gets well in the course of two or three weeks. The duration of the chronic form of impetigo is influenced by the number of eruptions, the state of the constitution generally, and the existence of other particular conditions, such as amenorrhœa, pregnancy, period of life, presence of scrofula, &c. I have seen the disease appear in a woman each time she was pregnant, resist the most energetic remedial measures, and get well spontaneously a short time after the confinement.

Chronic impetigo on the hairy scalp, of the upper lip, and other regions covered with hair, is often a very intractable disease, especially when the patient is advanced in life, when he is of a scrofulous constitution, or when his health has suffered in any way.

537. *Treatment.*—When impetigo appears with a character of acuteness on the face or hairy scalp of a child during the process of dentition, it is generally advisable to restrict remedial measures to simple attention to cleanliness: the eruption occurring under these circumstances is frequently accompanied with a signal improvement in the state of the constitution, which might be prevented from taking place by any thing like active remedial measures. I have seen the

(a) In the note to page 120, the diagnosis of eczema *impetiginodes* is given by Dr. Carswell.



ill-timed medication and cure of these impetigos, then entitled crusted tetter (dartres crustacées), followed by diseases of different degrees of severity; in other cases, the appearance of the pustular eruption has seemed to me to act advantageously on various old-standing diseases of an obstinate character.

On the other hand, the treatment of certain impetigos is to be conducted on the principle of effecting some modification in the constitution. I have had opportunities of satisfying myself on this point, by treating successfully with the preparations of iron, sulphur, and iodine, several impetiginous eruptions befalling individuals labouring under scrofula. In other cases where the impetigo has been preceded by amenorrhœa or dysmenorrhœa, I have derived great advantages from the preparations of iron and other emmenagogues.

When the state of the constitution affords no particular indication of cure, impetigo, on its appearance, and as often as the eruption is attended with a great degree of redness of the skin (impetigo erysipelatodes), or is distinguished by the abundance of its pustules, is to be treated by means of general blood-letting in adults and individuals in the flower of life, and by leeches in children and the weakly in constitution. Should amenorrhœa or dysmenorrhœa complicate the disease, the vena saphena should be opened, or leeches should be applied around the external organs of generation, especially when emmenagogues have been tried in vain. These bleedings will occasionally require to be repeated. They usually prove detrimental to individuals of a scrofulous or weakly habit of body. Whatever the temperament of the patient, the blood abstracted is almost invariably found to be buffy.

The local or general simple tepid bath at a low temperature (86° or 92° F.); and frequent ablutions with cold water, milk, decoction of bran, almond emulsion, decoction of mallows, digitalis, poppy-heads, &c., are used with advantage in this first stage of impetigo. At a later period, aluminous, saturnine, or alkaline washes, and the application of the ointments of the oxide of zinc, and of the acetate of lead, contribute to accelerate the cure, which often takes place without the necessity being felt of having recourse to any other measures.

In acute impetigo of the region of the beard, or hairy scalp, the hair must be removed with sharp scissors, and the diseased surfaces laid bare. This variety, like all the others, requires to be dealt with by means of emollient applications, and occasionally of blood-letting. Depilation, the utility of which is incontestable in favus, is always injurious in acute impetigo of the hairy scalp, or of the skin; neither is this measure ever necessary in the chronic impetigo of these regions. Saline purgatives, such as the acidulous tartrate of potash, and soda, the sulphate of magnesia, the sulphate of soda, &c., in doses of from two drachms to half an ounce daily, are also frequently employed with advantage.

When impetigo has lost its acute character, or when it has become decidedly chronic, the incrustations are best got rid of by means of the steam douche, which seems very often to have the effect of warding off a fresh eruption. It is even found advantageous to recur to the vapour-douche shortly after the formation of the crusts of impetigo in any stage of the disease whenever the skin appears but little inflamed. These douches directed upon the parts affected, before the formation of scabs, that is to say, during the pustular state of the eruption, or when any considerable degree of inflammation still lingers around the incrustations, are almost always injurious. I have frequently substituted, with good effect, the simple bath and ordinary emollient cataplasm, at a very moderate temperature, for the vapour bath and douche generally recommended in these cases.

2. It is seldom that local blood-letting and emollient and sedative applications are very actively employed in cases of chronic impetigo; although the practice, assisted by gentle laxatives, when the state of the digestive organs offers no bar to their exhibition, is one which, in analogous circumstances, has unquestionably been very frequently crowned with success.

When the skin is but slightly inflamed, and not very irritable, the artificial or natural sulphureous baths of Barèges, Llochesche, Cauterets, Bath, Harrowgate, &c., are often resorted to with advantage at a temperature of from 95° to 100° F., and this is not only in the cases of the elderly and weakly, but in those of individuals in the spring and

vigour of life, possessed to all appearances of an excellent constitution. The time of continuing in these baths ought to be gradually prolonged, and ultimately carried to the length of several hours each time (§ 127).

The sea-water and the alkaline bath are generally less beneficial; yet it does sometimes happen that taken every day, or on alternate days, along with the fresh water bath, they act more beneficially than the sulphureous bath. Alkaline washes are usually prescribed at the same time; and these may be combined and alternated with the use of acidulous lotions.

Dr. A. T. Thomson has recommended the medicinal hydrocyanic acid in impetigo. I have tried it in the proportion of two drachms to half a pound of distilled water, as a lotion with some success. I cannot affirm, however, that its action was more salutary than that of the sulphuric or nitric acid largely diluted with water. Should the skin chance to become excoriated, these hydrocyanic acid lotions must be laid aside; and in no case are they to be used but with extreme reserve.

Ioduretted-sulphureous lotions have been particularly recommended by M. Alibert. They appear to be more especially useful in cases of impetigo attacking subjects of a scrofulous constitution.

In chronic and inveterate impetigo, when the eruption extends to but a small surface, the parts affected are frequently cauterized to good purpose with a solution of the nitrate of silver, with the *potassa cum calce* in substance, or the dilute hydrochloric acid.

I have also occasionally used with good effect, under similar circumstances, an ointment consisting of a scruple of the proto-nitrate of mercury to an ounce of hog's-lard.

I have very seldom ventured on the application of a blister to surfaces affected with impetigo, although this measure has been recommended and employed with advantage.

Compression is an auxiliary measure which I have frequently instituted with the happiest results in impetigo *scabida* affecting the lower extremities and complicated with œdema, ulcers, varicose veins, &c.

Charcoal was formerly lauded as a topical application in the treatment of impetigo, and particularly when the scalp was the part affected; I have not made the action of this article a subject of such particular study as to be enabled to speak from personal experience of the degree of good which results from its application.

538. There are other medicinal substances whose action on the evolution and progress of impetigo is incontestable. I have treated very obstinate impetigos successfully by the *nitric acid* in doses of half a drachm daily, in a pint of barley-water sweetened to the taste. When this sherbet seems to distress the stomach, it is generally enough for patients to suspend its use for a few days, and to take a warm bath at convenient intervals, in order to be enabled to resume it. It very seldom happens that this medicine is continued for a month or six weeks without accomplishing a cure.

I have, in fine, seen a small number of very old and inveterate cases of impetigo which have only yielded to *antimonial* and *arsenical* medicines. These remedies are of course to be administered with every precaution for the patient's safety; their use being suspended during an interval of several days, as often as their action on the system appears to be becoming excessive. In this way all notable and permanent injury, as well to the digestive organs in particular as to the system at large, is avoided, without the curative effects of the medicines being in any degree diminished.

Several other compound and simple medicines of various degrees of activity, such as the juice of the apium *graveolans*, the decoction of sarsaparilla, of dulcamara, of the ulmus *pyramidalis*, of the root of the arum *maculatum*, &c., have been used with success in certain forms of chronic impetigo (*crusted tetter*); but the individual cases, in which the use of these substances is preferable to those I have mentioned more particularly, have not yet been very satisfactorily ascertained. (a)

(a) Considering the temperament and constitution of those who are most frequently attacked with impetigo, we cannot refuse to it a scrofulous origin or at least a complication with scrofula;—and, in so regarding it, we shall be led to the employment of the remedies generally thought to be best adapted to that disease. Of course a preference will be given to mild laxatives, the use of the mineral acids, and



*Historical Notices and particular Cases.*

539. If, at the present day, impetigo be an affection but little known to a number of practitioners, we have to thank the confusion that still reigns in the nomenclature of the diseases of the skin; the various senses in which this word has been used (Vocab. impetigo), and the multiplicity of expletives that have been introduced to designate the acute or chronic, the pustular, encrusted, furfuraceous or erythematous state of the disease, the varieties in appearance it assumed as it affected the trunk, hairy scalp or extremities, may be fairly charged with the principal blame as causes of this prevailing ignorance.

The Greeks appear to have referred to this disease under the title of *ψωρα* *ελαωδης*.<sup>1</sup> Celsus<sup>2</sup> has included under the name of *impetigo*, not only the pustular disease we have just been discussing, but two other squamous affections, namely, lepra and psoriasis. Willan<sup>3</sup> was the first who gave an accurate account of impetigo; he fell into a mistake, however, in describing impetigo of the scalp as a particular disease, under the title of *porrigo favosa* (Vocab. porrigo). M. Alibert, who had described impetigo affecting the trunk, under the title of *dartre crustacée*, and impetigo of the scalp, under that of *teigne granulée*, in his "*Precis des Maladies de la Peau*," has more recently designated the first of these forms of the disease, by the name of *méliagre*, and the second by that of *porrigo granulata*.

Impetigo has long been designated in France under the title of *dartre crouteuse*, or *crustacée*, and in England, under that of *humid or running tetter*.

Impetigo of the scalp has been described by Forestus<sup>4</sup> under the head of *favus*, a term which, at the present day, is applied to another disease; it has been particularly, but erroneously noticed, as already stated, by Willan, under the name of *porrigo favosa*, and by Alibert, under that of *teigne granulée*.<sup>5</sup>

The Latin translators of Aëtius<sup>6</sup> signalize impetigo of the face under the denomination of *ulcus melicerida*.

Callisen<sup>7</sup> describes impetiginous eczema under the title of *herpes pustulosus*.

Dr. A. T. Thomson<sup>8</sup> has published some observations on the iodine, and especially the iodide of iron, and, at times, cinchonic preparations.

In the acute stage of impetigo, or where it is accompanied with fever, reliance can only be had on antiphlogistic remedies, both general and topical, as recommended in the text. Dr. Crampton has treated a series of cases of impetigo *capitis*, and other forms of scalp affections, almost entirely by constitutional remedies, of which the principal ones were purgatives and the warm bath.

Mr. Erichsen (*Practical Treatise on Diseases of the Scalp*), coincides with M. Rayer in his high estimate of nitric acid; and he also uses the nitro-muriatic.

In the more obstinate cases which resist the milder treatment, and which, happily, are comparatively few in number, recourse may be had to the bichloride of mercury in the dose of a sixteenth of a grain united to extract of hemlock, or Fowler's solution in minute doses. Donovan's solution, in doses of five to twenty drops, has cured some old cases of impetigo.

Plumbe lays great stress on the local treatment, in the frequent removal of the diseased secretion; the benefit from which, if carried into effect by frequent ablution of the part with warm water, is incalculable. "By this plan, in conjunction with the exhibition of simple alteratives, entirely rejecting any thing in the shape of ointments or other greasy applications, the disease will be often entirely subdued."

In using the hydrocyanic solution, the favourite lotion of Dr. A. T. Thomson and Plumbe, the caution in the text is worthy of all attention and observance.

external use of the prussic or hydrocyanic acid in the treatment of impetigo. Cases of, and remarks on, this disease have been consigned in several periodical publications,<sup>9</sup> and inaugural dissertations.

Marcolini<sup>10</sup> has described lepra, and not impetigo, under the latter title. The observations of Sauvages, and of Peter and Joseph Frank, on impetiginous affections are very obscure, and convey no ideas but of diseases badly defined and imperfectly described.

CASE LXXXI.—*Acute impetigo of several parts of the skin; rapid cure by blood-letting, vapour baths, and purgatives.* A master mason, twenty-seven years of age, of a sanguineous temperament, came to consult me on the 12th of April, 1826, on account of a disease of the skin, under which he had laboured for nearly six weeks. On the left cheek there were two humid crusts, an inch in diameter, of a yellow colour, prominent, and with circumferences slightly inflamed. A crust of the same sort, but of smaller dimensions, was seen on the chin, and on the right cheek, there existed a cluster of small psyracious pustules. A fourth incrustation, the size of a double sovereign piece, was observed on the back of the left hand. And on the fore-arms and insteps, four additional isolated scabs, of a yellowish-brown colour, dry, adherent to the skin, and from an inch to an inch and a half in diameter, were remarked. In other respects this individual enjoyed excellent health. I bled him to the extent of twelve ounces from the arm, and prescribed the sulphurated lemonade for his drink. Eight days afterwards three simple vapour baths were taken. The scabs were detached, and red marks, of the same dimensions, alone indicated the situations they had occupied on the skin. I then prescribed a couple of doses of sulphate of magnesia, half an ounce to each, dissolved in a weak infusion of senna leaves. The use of the tepid bath a few times confirmed the cure, which in this case was accomplished by the twenty-fifth day of the treatment.

CASE LXXXII.—*Impetigo figurata of the leg; occurrence of the same disease five years afterwards on the face, cured by the steam douche; an analogous eruption proving salutary in a child.*—I was asked on the 18th of September, 1831, to see M<sup>lle</sup> \* \* \*, aged twelve years, of a sanguineous lymphatic constitution, who had been troubled for the last twelve days with a slight excoriation of the right leg. On the anterior aspect of the tibia, there was a small inflamed surface an inch and a half in diameter one way, by an inch the other. The skin here was red, moist, denuded in its epidermis, and presented a great number of small pores, similar to those that are observed in impetigo figurata, when the incrustations have been removed a short while after their formation. The inflamed surface was discharging a yellowish, sero-purulent fluid. A number of small yellowish, or white-coloured pustules, which scarcely rose above the level of the skin, were observed in the circumference of this excoriated spot, and under it, a small cluster of psyracious pustules was remarked. The pustules had appeared without any assignable cause.

The health of M<sup>lle</sup> \* \* \* was excellent. The affected parts were occasionally the seat of pruritus, so violent in its character, that the young lady had the greatest difficulty to restrain herself from scratching them, although she knew that such indulgence would certainly be followed by an aggravation of her complaint. I recommended that the parts should be frequently bathed, during the course of the day, with Goulard's wash, and that the excoriations should be dressed with saturnine cerate, and kept covered with a crumb of bread cataplasm softened with decoction of mallows. This simple dressing allayed the itchiness, and lessened the inflammation. No fresh pustules appeared to be forming. M<sup>lle</sup> now took a few sulphureous baths, and made a rapid recovery from her slight attack of impetigo figurata. In the month of April, 1826, after long-continued application to her studies, M<sup>lle</sup> \* \* \* was a second time attacked with impetigo, which on this occasion made its appearance on the face. Several small clusters of yellow and slightly prominent psyracious

<sup>1</sup> Aëtius. Tetrab. Serm. iv. cap. 130.

<sup>2</sup> Celsus. De re medicâ, lib. v. cap. 28, § 17.

<sup>3</sup> Willan. Practical treatise on porrigo, &c., 4to. London, 1814.

<sup>4</sup> Forestus. Observ. et curat., lib. xxviii, folio de favo, p. 315.

<sup>5</sup> Monagr. Des dermatoses.

<sup>6</sup> Aëtius. Tetrab. Serm. iv. p. 167.

<sup>7</sup> Callisen. Chirurg. Hodiern., § 612. Art. Herpes.

<sup>8</sup> Lond. Med. and Physic. Journal, February, 1822.

<sup>9</sup> Observ. d'impetigo figurata des joues guérie par l'arséniate de potasse (Journ. hebdom., t. iv. p. 77).—Impetigo sparsa (Revue médicale, Juin, 1820, p. 346).—Impetigo des joues disparu sous l'influence d'une autre maladie (Lancette française, t. p. 145).—Eczéma impetigineux avec ophthalmie (Bull. des sc. médic. de Férussac, t. xxiv. p. 177).—Note on the exterior use of the cod-liver oil in the impetigo scabida (Lond. Medic. Gazette, v. x. p. 796).—Rivière. Diss. sur la méliagre, 4to. Paris, 1830.

<sup>10</sup> Marcolini. Sopra alcune impetigini memoria, folio. Venezia, 1820.



pustules were evolved in succession during fifteen days, on the cheeks, chin, upper lips, ears, and *alæ* of the nose, each of which was speedily converted into yellowish crusts, very similar in their colour to the gummy exudations of certain trees. The integuments at the base of these clusters were not inflamed. The disease in this instance yielded in the course of twenty days to the use of the steam douche.

During the same year, a child of three years old, the brother of this young lady, who had long laboured under a chronic inflammation of the mucous membranes of the cæcum and colon, was attacked with a similar impetiginous affection of the skin of the face. The appearance of this eruption having coincided with the entire cessation of the cæco-colitis, I did not take any immediate measures for its cure. After continuing about two months and a half, the impetigo seemed, if the expression may be allowed, to have exhausted itself, and now left no traces of its presence, save a few red blotches upon the face. The child had not for a long time enjoyed such health as it did subsequently to this attack.

CASE LXXXIII.—*Traces of impetigo sparsa on the upper extremities; impetigo figurata on the limbs; tuberculations of the skin covered with crusts; dysmenorrhœa; cure.*—Marie Halé, aged thirty-one, married, and having had two children. Since her last confinement, eight years ago, she has been irregular in her catamenia, and the discharge has been scanty; she now suffers from leucorrhœa, which becomes more abundant on the return of the menstrual period.

Towards the end of the year 1829, she had the first attack of a disease of the skin, similar to that she is now labouring under (impetigo), from which she recovered, after having been under treatment for three months and a half. Two years subsequently (1831), the patient had a second attack of the same complaint, and about a month before her admission into the Hôpital de la Charité, on the 10th of March, 1833, she was seized for the third time, with the same cutaneous affection. An eruption of small pustules made its appearance successively on the outer part of the right and then on that of the left thigh, spreading to the knees of the same side. The pustules were yellow on their summits, and, bursting, discharged a quantity of yellowish fluid, which concentered into greenish-looking scabs. The forearms, the lower third of the arm, and the posterior surface of the right ear, were also, in their turn, affected with the same kind of pustular eruption. The pruritus was not very distressing, and the appetite had not sensibly fallen off. At the period of her entrance into the hospital, several *crusted patches*, rounded, dry, hard, rough and uneven, of a yellow, or yellowish-green colour, and raised about three lines above the level of the skin, were perceived in the situations mentioned. These scabs were, further, thinner in their circumference than towards their centre, and were loose for about a space of two lines around their edges, being simply in contact with the surface of the dermis which looks red and dry in these situations, although, upon the removal of the whole of the incrustation, which is easily affected, it then looks moist and tender, and of a vivid punctuated red colour. Under some of the scabs, a number of small rounded white points are remarked which resemble nothing more closely than those white bodies which are occasionally seen on blistered surfaces. Under others, the corion is uneven, and presents a tuberculated or mammillary appearance. The incrustations are of very various dimensions, from two or three lines to an inch and a half in breadth. They also vary somewhat in their appearance in different places. (*A drachm of subcarbonate of iron.*)

March 11th.—The patient was put upon the use of barley-water with the addition of half a drachm of nitric acid to each pint of fluid. Emollient poultices were ordered to the forearms, and the chalybeate was continued in doses of thirty-six grains. 13th.—The forearms were less scaly (*alum wash*); pricking and unpleasant scalding. The iron and nitric acid were ordered to be continued, the latter in the dose of a drachm daily. The alum-wash was found to irritate the parts to which it was applied too much, and was consequently discontinued, the emollient cataplasms being resumed in its stead; on the 19th the simple warm bath was prescribed.

19th.—The tender skin was anointed with hog's lard, and this measure, together with the daily use of the warm bath, was continued to the 7th of April. At this date the improvement was very conspicuous; the skin was now less fiery, and the crusts and squamæ of

the thighs had not been reproduced. As the menstrual period approached, the baths were discontinued. On the 10th the catamenia not having made their appearance, sixteen leeches were applied to the external parts, which bled freely. On the 11th the patient was found pale and weak. The baths were resumed on the 15th, and on the 21st the nitric acid, of which the patient began to complain, was replaced by the citric acid, and the vapour bath every other day was substituted for the hot-water bath. The iron was continued as before. The patient was getting well rapidly. For the last twelve days no squamæ had been reproduced; the skin in the parts affected assumed a pale rosy hue; it was now soft and pliant, although still in a less degree than in health,—it no longer looked clear and shining; the mammillary tubercles had disappeared from the left thigh. In the course of the month of March, the leucorrhœa was diminished in quantity; the catamenia appeared some days earlier than anticipated, and, proving scanty, a few leeches were applied by way of substitute. On the 10th of May the parts of the skin that had been affected, were almost completely natural in their appearance.

CASE LXXXIV.—*Eczematous impetigo occurring during pregnancy; loss of the hair and nails; cure.* S. Lainée, nineteen years of age, of a sanguineous temperament and robust constitution, presented herself among the out-patients of the Hôpital St. Antoine on the 14th of September, 1828. She gave us to understand that in her childhood she had been affected with a cutaneous affection, precisely similar to that under which she now laboured, and that she had had a second attack in the course of the year 1827, during her first pregnancy. Seven months and a half gone in a second pregnancy, she became for the third time affected with an eruption of small psyrdracious pustules which were scattered over the surface of the trunk, and especially of the abdomen, and surrounded at their bases by a pretty distinct areola. A number of pustules of the same kind appeared here and there collected into groups, and around these the rosy circle was more particularly conspicuous. A number of greenish scabs or incrustations, not quite so thick as those of impetigo generally are, were also remarked in various situations. These adhered strongly to the skin, and were encircled by a violet-red coloured line. Lastly, between these incrustations several spots were remarked of a dirty violet hue, the surface of which was either smooth or covered with slight squamæ; they had, however, been formerly furnished with crusts similar to those of other districts of the skin.

Between the 18th and 21st of September, many groups of pustules appeared on the trunk and extremities, whilst others that existed previously were drying off. On the 25th the eruption had increased to such an extent as to render blood-letting necessary, which was accordingly practised to the amount of twelve ounces. On the 28th the trunk, (the abdomen in particular) was covered with irregular round-shaped scabs, from an inch to an inch and a half in diameter, yellowish in their colour, rather moist and of considerable thickness. The intervals between the scabs were occupied with many small pustules, irregularly scattered, or congregated into groups of six, eight or ten together; the patient could not move in her bed without suffering acute pain, so completely was every part of the body beset with recent pustules or covered with older incrustations; she also endured a great deal from a sense of pricking and of increased heat in the integuments generally; the pulse was hard, the tongue of the same vivid red which is seen in scarlet fever, the thirst very great. On the 22d the face was flushed, the features swollen, the pulse full and frequent, and the pustules still more numerous than yesterday, covering the arms completely, and with the previously existing incrustations producing so much stiffness that it was found impossible to straighten them sufficiently to perform the venesection which was held necessary.

From the 30th of September to the 2d of October, the inflammation of the skin ran very high; portions of the cuticle, from the confluence of the pustules, were raised in different places, so as to resemble purulent bullæ. In the evening of the day last named, (2d of October) the patient was taken in labour, which went on through the 3d, during the afternoon of which day the patient became delirious and alarmingly ill. She was bled to the extent of ten ounces. She was delivered during the night and immediately fell asleep.

On the 4th, the patient still complained of a feeling of general heat



which, however, was less troublesome than it had been. The tongue had now lost the preternatural redness which it had exhibited during the whole course of the disease. The progress of the eruption appeared to have received a check; the lochia flowed naturally.

On the 6th a few fresh pustules made their appearance on the face, and on the seventh several purulent deposits, were observed under the cuticle of the palms of the hands and soles of the feet. The incrustations over the trunk generally were now either removed or in progress of being cast off. The fall of the crusts was succeeded by the detachment of large epidermic laminæ from the surfaces that had been affected.

The patient complained greatly of pain and heat in the lower extremities, the epidermis of which, entirely detached from the cutis vera beneath, by the motion and rubbing of the parts, formed a sort of prominent roll about the middle of the leg. The exposed corion was red and humid. The purulent exudations, which had taken place in the palms and soles, were for the most part confluent, and formed continuous flat vesications in these places. From the 6th to the 12th, the eruption and consequent stages of scabbing, detachment of the crusts, and desquamation of the cuticle, were repeatedly renewed; the epidermis of the soles of the feet was thrown off in a single piece on the day last mentioned. The nail of one of the toes was at this time half loose, and before the end of the first week in December the whole of these appendages were detached in succession.

The loss of the epidermis was followed by that of the hair on the coronal and parietal regions.

On the 15th of December the patient had completely recovered. The nails and hair grew again at a later period. (a)

(a) The following description of disease and cure by Dr. Carswell is instructive.

"The next case is one of impetigo, which occurred in a boy ten years of age, of sanguineous temperament. He had generally enjoyed good health, although he has had two or three times an eruption on the head. The first occurrence of the eruption was two years ago, just after the death of his father, who, he said, had an eruption on the head at the time of his death, and from whom he supposed he caught it, although a brother and sister, equally exposed with himself, had no eruption.

"The present eruption occurred two months ago, a few pustules only occupying a small spot, which discharged a good deal, and gradually spread.

"On his admission there was an eruption on the top of the head, on the left side, consisting chiefly of incrustations, of a dry, rather brittle appearance, of a dirty, yellowish-gray, or brownish colour, intermixed with, and spreading amongst the hair. The elementary character of the eruption was not seen on any part of the head at this time, but it soon after appeared in the form of the acroes pustule; that is to say, a small prominent pustule, larger than the psyraceous, containing a yellow-coloured fluid pus, which, after a short period burst, and spread its contents amongst the hair, which became converted into yellowish-gray or brown crusts. By means of these characters we recognized the presence of impetigo. The prominent pustule, with its fluid contents, were sufficient to establish the diagnosis, and to distinguish the eruption from porrigo favosa and porrigo scutulata, the two contagious forms of pustular eruptions of the scalp. When we can accomplish this important point, we need not trouble ourselves to find out whether an eruption of the scalp is one of porrigo larvalis, or porrigo granulata, as they have improperly been called, as both of these eruptions are modified forms of impetigo, or of eczema impetiginodes, and are not propagated by contagion.

"The general health of this boy was good, and remained so while he was under treatment, except on one occasion, when he had fever for two days, from derangement of the bowels. The treatment continued for about the same length of time as in the preceding case. It was commenced by the removal of the hair, and the application of poultices. The patient was allowed full diet, and the bowels were regulated by small doses of calomel and rhubarb every alternate night. The removal of the hair on the affected parts was accomplished by the daily use of the alkaline ointment, and washing with warm water and soap.

## FAVUS.

Vocab. *Porrigio favosa*, &c.; *Tinea favosa*,

540. The Romans made use of the word *favus* to signify the cell or collection of cells of the waxen comb in which bees store up their honey. From some analogy in point of form, the word has been impressed into the service of medicine and used to delineate a chronic inflammatory affection of the skin, essentially contagious in its nature, and principally characterized by the appearance of its scabs which are of a clear yellow colour, very dry, strongly adherent to the skin, circular and cupped, and either isolated, or agglomerated into continuous masses with raised and inverted edges, the surface of which presents numerous characteristic depressions. (b)

"On several occasions, however, the eruption spread, or appeared on previously healthy parts of the head, and also on the ears, by the formation of pustules, to which the same means of treatment was applied. After this had ceased to occur, and the inflammatory stage had subsided, the zinc ointment was employed for some time; and, lastly, the nitrate of silver, which completely checked the further progress of the disease.

"The affected parts of the head did not present that baldness and glossy appearance of the skin, which were observed in the cases of porrigo favosa. On the contrary, the hair was only thinned and shortened, and the skin presented numerous dark points, indicating the protrusion of others from its surface. In most cases of impetigo, which constitute a great number of the pustular eruptions of the scalp, the treatment employed in this case will prove successful, when the general health is not impaired, and proper attention is paid to food, clothing, and exercise. In debilitated and scrofulous children, however, general treatment requires special attention. Besides attending to the circumstances just mentioned, and regulating the biliary and intestinal secretions, the warm or shower-bath, according to circumstances, must be employed, combined with mild tonics, together with the use of those remedies which act in a special manner on the capillary circulation, and thereby promote the important functions of secretion and absorption. And no remedy in our possession exercises such a speedy and beneficial operation in this respect as the iodide of iron, particularly when aided by the other general means to which I have alluded. In debilitated, scrofulous, and especially anemiated children, its remedial agency is often remarkable. I need not remind you that its use is counter-indicated in all cases of gastro-intestinal irritation, and even where local inflammation of a sthenic character is present. These states must first be subdued by proper antiphlogistic treatment."

(b) The student of dermatology is not a little embarrassed by the different divisions, as well as names of some of the *pustula*, and particularly of the impetiginous and favous, or porriginous forms. The five genera of pustular diseases, according to the arrangement of Bateman, viz: *impetigo*, *porrigo*, *ecthyma*, *variola* and *scabies*, have, as this writer properly remarks, "nothing in common in their character, except the appearance of pustules in some state of their progress; for some are contagious and others not, some are acute, and others chronic." Of the four varieties of pustules; *phlyzium*, *psyracium*, *achor*, and *favus*, the first three are chiefly used as expletives in description, while the latter is, by M. Rayer, employed to characterize a distinct form or species, which corresponds with the *tinea favosa* of his first arrangement, the *teigne faveuse* of Alibert.

"*Phlyzium* is a pustule commonly of a large size, raised on a hard circular base of a vivid red colour, and succeeded by a thick, hard, dark-coloured scab. *Psyracium* is a small pustule, often irregularly circumscribed, producing but a slight elevation of the cuticle, and terminating in a laminated scab. Many of the psyracia usually appear together, and become confluent; and after the discharge of pus, they pour out a thin watery humour, which frequently forms an irregular incrustation.

"*Achor* and *favus*. These two pustules are considered by the majority of writers from the Greeks downwards, as varieties of the same genus, differing chiefly in magnitude. The *achor* may be defined a small acuminate pustule, containing a straw-coloured



541. *Symptoms*.—Favus occurs principally on those regions of the common integument of the body which lie over a dense and strongly reticulated stratum of cellular tissue, abundantly provided with piliferous follicles. It is therefore very commonly seen on the hairy scalp, from whence it sometimes extends to the temples, forehead and eyebrows, more rarely reaching to the shoulders, the lower parts of the scapular regions, the elbows and forearms, situations in all of which, however, it is occasionally met with; I have even seen it extending over the whole of the back part of the trunk as far as the sacrum, and attacking the knees, and upper and inner parts of the legs in a child, twelve years of age, whose hairy scalp escaped completely. The hands and forearms may also be exclusively implicated; but the disease in such cases may almost always be traced to the accidental inoculation of the contagious discharge upon these parts.

The pustules and scabs of favus are in one instance *disseminated*, in another they occur disposed in circular or oblong clusters; according to these different appearances two varieties of the disease have been established: 1, favus *dispersus*; 2, favus *confertus*.

542. Favus *dispersus* (porrigo *lupinosa* Willan). This form of the disease, according to Willan and Bateman, makes its attack under the form of very minute pustules, not very evident to the naked eye, scarcely rising above the level of the skin, and from the very day of their formation covered on their apices with a small yellow scab. These pustules, in fact, contain the merest globule of pus, which is not shed on the surface but concretes and dries in the interior. I have myself seen these small yellow pustules in several cases of favus. Their existence, however, has been disputed by Messrs. Mahon and Baudelocque. The latter allows, nevertheless, that the favous matter is deposited in a fluid state within the hairy bulbs. The difference of opinion, consequently, seems to turn upon a variety of meaning attached to the word *pustule*. Whatever the mode of formation of the pustules, this is certain, that the matter of favus is not long of appearing on the exterior in the shape of crusts, which at the very earliest period of their existence present a small cup-shaped depression in their centre. The dimensions of these crusts increase, still preserving the circular form and depressed centre peculiar to them. They occasionally attain a magnitude of five or six lines in diameter. Some short time after the appearance of the first incrustations, others are commonly evolved in their vicinity or in other regions of the body. When very numerous and coherent, the scabs of favus by their aggregation compose continuous incrustations of considerable extent, on the surface of which the capped form of the individual crusts may frequently be recognized. Should it happen, indeed, that this peculiar shape is lost through the copiousness of the secretion around them, by carefully removing the superficial layers, each particular favus,

matter, which has the appearance, and nearly the consistence of strained honey, and succeeded by a thin brown or yellowish scab. The *favus*, or *χένιον* is larger than the *achor*, flatter, and not acuminated, and contains a more viscid matter; its base, which is often irregular, is slightly inflamed; and it is succeeded by a yellow, semi-transparent, and sometimes cellular scab like a honeycomb; whence it has obtained its name." Bateman's *Practical Synopsis*.

Impetigo is characterized by the appearance of the small pustules denominated *psudrasia*; while porrigo (of Willan and Bateman) is principally distinguished by an eruption of the pustules denominated *favi* and *achors*. Objection has been made, and with good reason, to the abuse of the term *porrigo*, since some of its forms, viz; *P. larvalis*, and *P. favosa*, are now ranked under the *impetigines* and constitute impetigo *figurata* or *capitis* (impetigo *eczematosa*); and *P. furfurans* belongs to one of the varieties of *eczema*, rather than to the *favi*; while *P. decalvans* is more a result of prior disease of the scalp than a disease itself: it is one of the varieties of alopecia. Hence there are but three forms of porrigo left, *favosa*, *lupinosa* and *scutulata*, which, as both M. Rayer and Mr. Wilson judiciously remark, should be merged in the species of favus,—the two varieties of this latter, *F. dispersus* and *F. confertus* corresponding with *P. lupinosa* and *P. scutulata*. These remarks on porrigo, apply with equal force to tinea, and we may join in the expression of the wish of recent judicious and experienced dermatologists, that the former should be, as the latter is become, an obsolete term.

centrally depressed and isolated, may still be very distinctly made out.

The cup-shape, assumed by the crusts of favus, have caused them to be compared, as already stated, to the cells of the honeycomb, to the depressions, observed on the seeds of the lupine (whence the denomination porrigo *lupinosa* of Willan), or to the capsules of certain lichenous plants that grow on trees. When the crusts of favus are recent they are of a yellow or tawny colour. As they grow older and drier they gain a clear yellow or whitish cast, they then crack, shiver, and become reduced to a powder which bears a considerable resemblance to pulverized sulphur. They then present nothing like regularity of form. These crusts are deeply set in the skin, to which they adhere firmly by their edges.

According to M. Baudelocque their primary seat is under the epidermis.

When a crust of favus, of recent formation, is removed with such care as to cause no effusion of blood, it is found to present a round nipple-shaped elevation, surmounted by a contracted, and, as it were, strictured portion, which enlarges until it terminates at the surface of the skin. On a point of this mammillated surface a slender, conical and moist prolongation is occasionally seen. In the corresponding point the skin presents a small, smooth depression, proportioned in size to the crust, from whence a serous yellowish and transparent fluid exudes. If the crust, thus detached during life, be of older date, its deep surface no longer presents any nipple-like projection, and its thickness at its centre and around its edges is very nearly uniform. The outer central depression corresponds with a slight convexity of the inner aspect of the incrustation. Under the older crusts the skin presents a circular depression, wider and generally of less depth than in the *favi* of more recent formation. Freed from a recently formed scab, the skin speedily regains its natural thickness, and the cuticle is reproduced without any remaining cicatrice when no new crust is formed.

The large incrustations of favus, formed by the agglomeration of several contiguous scabs, are not generally observed to possess any particular form or regular disposition of parts. Their deep or inner surface presents several slight projections separated by linear depressions. The skin under these incrustations presents a number of small, superficial, lenticular depressions separated by linear elevations and inequalities corresponding with the depressions observed on the inner aspect of the incrustations. Under the depressed points the skin is occasionally reduced to half a line in thickness; the papillæ are red and denuded, but not ulcerated even in those situations where the crusts appear buried in the skin. On each of these depressions a minute red central point is perceived, which is often traversed by a hair, and a small red circle which corresponds with the margin of each particular scab. To conclude, I have occasionally found the skin softened and of a violet-red colour under very old incrustations in favus. (a)

(a) "The yellow substance which constitutes the crusts of favus has been satisfactorily proved, by recent investigation, to be an organic growth of simple structure, and bearing a marked resemblance to those inferior numbers of the vegetable kingdom, denominated *mould*. The structure of these crusts appears first to have attracted the attention of Remak, who had observed, so early as 1836, their composition of 'fungoid filaments.' Professor Schoenlein, of Zurich, next called them to notice in a paper in Müller's Archiv. for 1839, on the pathology of the impetigines, in which he makes no doubt of the fungous nature of the substance, and he illustrates his communication by a rude figure of the appearance which they presented in his observations. In pursuance of Schoenlein's researches, they were examined by Fuchs and Langenbeck, of Göttingen; more recently they have been studied by Dr. Gruby, of Vienna, who expresses himself to have been ignorant of the labours of Schoenlein. Dr. Gruby has, moreover, given a clear and lucid description of the growth, which he regards as a parasitic plant, and has determined it to belong to the genus *mycodermis*. The following is an abstract of a paper, from the pen of Dr. Gruby, on this subject, in Müller's Archiv. for the present year:—

"The cup-shaped crust of favus is situated upon a depression of the dermis, and is covered by a sheath of epidermis, which is thickest



The smell of the scabs and incrustations of favus is singularly like that of the urine of the cat. When they are softened with emollient cataplasms the smell changes and becomes faint and sickly, and something similar to that of bones which have been boiled with their ligaments. The crusts thus detached are speedily reproduced with the

on its concave, and thinnest on its convex surface. Immediately within the epidermis is a thin layer of amorphous substance, composed of minute molecules; this layer is dense, of a sulphur-yellow colour, and forms a capsule, which is in contact by its external surface with the epidermis, and by its internal surface with a fungous growth. The parasitic growth is attached by means of its roots to the yellow capsule, while its stem and branches extend inwards towards the centre of the capsule, and constitute the whitish-gray and porous contents of the crust. The roots and branches of the mycoderm are smooth, cylindrical, transparent tubuli, which divide dichotomously from point to point. The interior of the tubuli is filled with a granular substance, and divided here and there by transverse septa. At the ends of the branches are situated the seeds of the plant which are of a yellowish-white colour, and either collected into an irregular assemblage, or disposed in the form of a garland. The diameter of the branches of the mycodermis is  $\frac{1}{1000}$  to  $\frac{1}{25}$  of a millimetre; that of the molecules contained within the tubuli,  $\frac{1}{10000}$  to  $\frac{1}{1000}$  mm.; and that of the seeds,  $\frac{3}{100}$  to  $\frac{1}{100}$  mm. Dr. Gruby has detected seeds in the follicles of the hair, and impacted in the ducts of the sebaceous glands.

"To ascertain the degree of contagious power of the mycodermis, Dr. Gruby inoculated various mammiferous animals, birds, reptiles, and insects, but unsuccessfully; he was equally unsuccessful in his own person, but succeeded, after seventy-six attempts, in reproducing the mycodermis in a cryptogamic plant.

"Mr. Busk, in a paper entitled 'Observations on Parasitical growths on Living Animals,' in the Microscopic Journal, (No. 10,) has given an excellent figure of the mycodermis. He represents the crusts as consisting of a series of oblong cells connected by their extremities.

"However closely the fungous growth here described may resemble a plant, its vegetable nature is very far from being established. The simplest forms of animals are composed, like the mycodermis of cells, variously connected together; and subsequent research may prove the growth under consideration to be of a similar nature. To my mind there is nothing improbable in the supposition of the origin of the growth from morbidly developed epidermic cells of the hair-follicle, or from the corpuscles of the sebaceous substance. In a preceding section of this work, I have shown that the latter are susceptible of considerable alteration, and that in this state they assume an appearance widely different from that of their normal condition. Mr. Busk also entertains doubts with regard to the vegetable nature of the mycodermis, and deduces an opinion favourable to his opinion, from the chemical analysis of the crusts of favus, given by Thenard, who found them composed of

Albumen . . . .	70
Gelatine . . . .	17
Phosphate of lime . .	5
Water and loss . . .	8

100

"Dr. Carpenter, in his 'Principles of Physiology,' (p. 453,) speaking on the same subject, remarks—"It has been assumed that the organization is vegetable, because it (mycodermis) consists of a mass of cells capable of extending themselves by the ordinary process of multiplication. But it must be remembered that the vesicular organization is common to animals, as well as to plants, being the only form that manifests itself at an early period of development in either kingdom, and remaining throughout life in those parts which have not undergone a metamorphose for special purposes. Hence, to speak of *porrigo favosa*, or any similar disease, as produced by the growth of a vegetable within the animal body, appears to the author a very arbitrary assumption; the simple fact being, in regard to this and many other structures of a low type, that they present the simplest or most general kind of organization." Wilson (*op. cit.* p. 322-4.)

characters that are proper to them. According to Thenard, they consist of seventy of albumen, seventeen of gelatine, five of phosphate of lime, eight of water and loss in every 100 parts.

The skin occasionally preserves its healthy characters between the crusts of favus; but, when the groups are numerous or much crowded, it frequently presents a morbid redness, and undergoes repeated furfuraceous desquamations.

In the majority of cases, and when the disease is properly treated, the depressions in the skin disappear after the fall of the scabs; the situations occupied by these, however, being still indicated by the presence of small-violet coloured spots, which disappear at length.

The skin may become ulcerated in old cases of favus affecting the scalp (*tinea favosa*). Small sores two or three lines in diameter, occasionally succeed the primary depressions. Under the larger incrustations the skin now and then presents an assemblage of small ulcers, separated from each other by crevices of varying depth.

The alteration and fall of the hair are the usual consequences of favus when it attacks parts provided with this appendage of the skin. The hair reproduced by the bulbs that have been affected is thin, white and woolly. Those parts that have lost their hair long continue smooth and shining. If the disease remains unsubdued for several years, the baldness may become general and permanent. Lastly, the skin has been seen altered or destroyed through its whole thickness, the hair bulbs and subcutaneous cellular substance the seat of small abscesses, and the inflammation extending to the periosteum and bones of the cranium, which have even been found changed in a greater or less degree in their structure.

543. Favus of the *hairy scalp* often causes a chronic inflammation of the glands of the neck and occiput. This effect is by no means constant, however; I have seen individuals who had long laboured under this form of favus without experiencing any such consequence. It is important not to confound these secondary inflammations of the lymphatic glands with those affections of the same parts, which individuals of scrofulous constitution are so apt to suffer from, before and altogether independently of the appearance of favus.

Pediculi are usually found in vast numbers among the crusts of favus; and children seem to enjoy a sort of ecstasy in tearing their scalp with their nails. The blood mixed with the discharge poured out in these and similar cases, by drying, forms incrustations of a colour different from that presented by the ordinary crusts of favus.

When favus appears on other regions of the body, the inflammation usually penetrates less deeply, it terminates much more rarely by ulceration, and its cure is much more readily accomplished.

Favus of the *trunk* and *extremities* is almost never attended with any other inflammatory affection of the skin; and unless it happens to be inoculated by accident it is very seldom seen complicating other cutaneous diseases. I have, however, had a man under my care, with *impetigo sparsa* of the lower limbs, who presented a single, but perfectly characteristic, crust of favus on the outer part of one of his legs.

I have met with favus developed solely on the cheeks and on the chin.

544. Favus *confertus*.—Favus and the cup-shaped crusts which characterize it, are occasionally seen upon the hairy scalp arranged in such a manner as to form circular *clusters* and regular *rings*. This variety of favus has been described by Willan as a particular species of porrigo (*porrigo scutulata*, the pustular ring-worm of several writers and the vulgar, *tinea annularis*, &c.). At the present day it is impossible to consider this eruption otherwise than as a variety of favus.

Favus *confertus* as it affects the scalp, is also frequently seen existing at the same time, and with the same external form, on the forehead and neck. It is characterized by circular, red-coloured patches, on which appear numerous small yellowish points (*pustules*, Willan), buried within the substance of the skin, not prominent, and generally traversed in the centre by a hair. These small yellow points, much more numerous in the circumference than in the centre of the circular patches, are soon succeeded by scabs which unite in such a manner as to form incrustations of a breadth corresponding to the extent of the eruption, and commonly circular in their shape. Dry and friable, these incrustations are detached from time to time in small pieces, which bear a strong resemblance to the crumbling mortar



of a wall that is going to decay from the effects of age and moisture. The hair, the bulbs of which are often affected from the commencement of the disease, speedily becomes thin, looks dry, and falls out on the slightest touch.

If this form of favus be left to itself, not only do the areas of the primary groups extend, but new ones are formed either spontaneously, or in consequence of the successive inoculation of the matter or powder of the original clusters. When these groups become very numerous they often get blended by their corresponding edges, and then appear as extensive and irregular patches. The circular character of the primary clusters, however, is still indicated by the portions of arcs of a circle distinguishable in the circumference of the larger incrustations. The hairs break off short, or are thrown out by the roots; but are soon succeeded by others, which are shed like the first. If the hair follicles are destroyed or seriously altered, the baldness remains permanent.

*Favus confertus* may denude several different parts of the scalp in succession. There is always room to apprehend the development of fresh incrustations, so long as any redness remains and a furfuraceous desquamation goes on in the parts that have been affected. Recovery, on the contrary, is at hand when the skin becomes less and less inflamed after the fall of the incrustations, and is only affected with very slight eruptions, successively at longer and longer intervals from each other.

545. I have observed that the intellectual faculties frequently appeared to be very limited in the individuals affected with favus; others again seemed prematurely stricken with the signs of old age. Favus of the scalp may be accidentally complicated with otitis, ophthalmia and coryza. One of the severest of these complications, however, is that with a chronic inflammation of the mucous membrane of the stomach and bowels. Bayle has remarked the occurrence of a chronic enlargement of the mesenteric glands, and several other lesions, which, however, on a careful review, do not seem to be more frequent in subjects affected with favus than in those labouring under other diseases. In inveterate favus, which has continued beyond the periods of childhood and youth, the nails of the feet and hands are occasionally found to exhibit particular alterations: they increase in thickness, become very much elongated, look rough on their surface and acquire a yellowish colour, analogous in some degree to that presented by the crusts of favus itself.

546. *Alterations of Structure.*—Duncan and Underwood assigned the bulbs of the hair as the seat of favus. According to Sauvages it principally affects the sebaceous follicles; this opinion was adopted by Murray: “*portioem sedem mali in folliculis dietis pinguidinosis, vel ipso textu celluloso quærendam arbitror*,” and has been lately reproduced in the following terms by the Messrs. Mahon. “An inflamed follicle gives out a morbid humour which becomes dry, fills and distends its cavity and at last causes its rupture and destruction. The depression in favus is nothing more than the orifice of the follicle which is now become visible; and the renewal of the disease is brought on by the evolving of a fresh favus on adjoining follicles, which compressed by the dilatation of the part, cannot be filled and distended nor break and be destroyed until after the renewal of this one. The object of the favus is in part, to destroy the bulb of the hair, which when brought about, the diseases disappears.”

The frequency of favus in those situations where the hair is most abundant,—the scalp, especially, and the regular presence of several hairs in each favous scab, induced M. Baudelocque to believe that the disease was evolved in the piliferous bulbs. The matter of favus deposited within the cavities of these follicles, according to him, concretes and forms a nucleus, which he designates under the objectionable title of *tubercle*. The secretion going on, he adds, concretes around the central nucleus, increases its size, and soon fills, and even distends the cavity of the follicle. The favous deposit, seeking a passage to the exterior, now penetrates the neck of the follicle, but being retained by the cuticle at its orifice, there dries into one with the duct. The same process is repeated as each fresh quantity of secretion attempts to escape; so that the solid part, conical at first, becomes broader by degrees, and ends by being changed into a cylindrical body, and then into a slightly convex superficial crust in proportion as the orifice, by being enlarged and, as it were everted,

approaches the level of the bottom of the follicle, the cavity of which is thus finally transformed into a superficial excavation. Lastly, the neck and orifice of the follicle cannot increase without the skin that surrounds them being pressed back upon itself in all directions, undergoing some slight increase in thickness, which is always in proportion to the degree of condensation endured.

The central depression in the crusts of favus is not the effect of accident. According to the author just quoted it depends on the conjunction of the following circumstances:—1st. The presence of a central cylindrical nucleus, confined by the cuticle, with which it is connected exteriorly in such a way as not to be capable of being elevated; 2d, the forcible detention of the favous secretion in the space around the central nucleus, the sides of the follicle and the epidermis; lastly, a gradual elevation of the detached epidermis, and consequent increase of height in the interval within which the favous fluid is confined.

The progress of the disease causes all trace of the whole of these conditions to be lost. When the cavity of a follicle, by the dilatation of its neck and orifices, is converted into a slightly concave superficies, if the secretion still goes on, the fluid by accumulating under the scab pushes it outwards, and forces back the corion towards the subcutaneous cellular membrane and circumjacent parts. The cuticle then gives way around the whole circumference of the incrustation, which is thrown off unless it happens to be retained by the hairs which pass through it; the follicle then resumes its original form; the cuticle is renewed, and the cure might be spontaneously accomplished did no new favous pustule make its appearance to continue the disease. When the rupture of the cuticle is only partial, the favous incrustation continues adherent to the skin; the secreted fluid oozes out, spreads and dries in the circumference of the primary scab, the diameter of which it thus increases, but, no longer encountering any cause of limitation, being no longer moulded in any peculiar manner, it forms prominences and depressions, which contrast strongly with the regularity of the central and primary scabs. It is by these inequalities that the point at which the epidermis has ceased to regulate the desiccation of the discharge may be ascertained.

547. In this explanation, M. Baudelocque, in common with many anatomists, has assumed that the epidermis, instead of penetrating into the interior of the piliferous follicular depression as far as the bulb, is reflected upon the hair near to the external orifice of the follicle. Mr. Chevalier, and several other anatomists, in whose opinions I myself concur, believe that the epidermis descends into the cavity of the follicle as far as the bulb of the hair, before being reflected along it. The following hypothesis, consequently, appears to me more tenable, and more in harmony with the disposition of the parts. I agree with M. Baudelocque that the orifice of the follicle is plugged by the favous matter drying and adhering strongly on the one hand to the neck of the hair, and on the other to the epidermis, which is reflected at the entrance of the follicle. The secretion of fluid going on continually from the inner surface of the follicle, which becomes gradually more and more distended, it may be supposed that the thin and but slightly extensible epidermis which is reflected into the follicle, gives way under that part where it is intimately connected with the kind of stopper formed by the concrete favous matter; farther, that this matter penetrates between the dermis and cuticle which is detached, and that it forms, by drying, a circular incrustation, prominent in its circumference and depressed in its centre around the central nucleus.

Be this as it may, it is, nevertheless, easy to distinguish the following particulars after death, in well-marked favus of the hairy scalp. On the inner aspect of the skin, a certain degree of redness corresponding to the clusters of the disease, and a certain number of small yellowish-white coloured deposits of a solid substance, perfectly identical with that composing the external incrustations. The minute swellings penetrate the substance of the true skin, and cellular membrane by an elongated tapering extremity. A hair is very frequently seen issuing from these favous deposits.

548. The presence of a hair in these collections, their seat, their form and their size are so many particular circumstances inducing me to believe that the favous matter is deposited in the dilated cavities of the cuticular conduits of the hairs; at the same time, the very slender and finely tapering form of the deep extremities of the deposits leads



me to suppose that the greatest quantity of the matter, thus concealed within the substance of the skin or in the cellular membrane beneath it, is not contained in the proper cavity of the piliferous follicles.

The degree in which the structure of the skin is changed in favus varies extremely, according to the standing and condition of the disease. In the more recent cases the conduits of the follicles are simply dilated by the accumulation of the favous fluid. In some cases we might be tempted at first sight to regard the skin as destroyed through its entire substance, were we not aware that the return of the integuments to their natural condition, and the cure of the complaint, advanced to the same state, without a trace of cicatrice, demonstrated the fact of there having been no important change undergone, far less any actual loss of substance experienced.

After inveterate favus of the scalp, the skin of the cranium, in unhealthy children, may ulcerate and become resolved in parts into a kind of fibrous reticulation surrounding numerous perforations of the corion, at the bottoms of which the pericranium is occasionally seen inflamed, and even the bones of the skull exposed and in a state of caries. (a)

549. *Causes.*—Next to eczema and impetigo, favus is the most common of the chronic inflammations that affect the hairy scalp; it is not observed in the same proportion on other regions of the body. Favus attacks both sexes indiscriminately and may make its appearance from infancy till a very advanced period of life. By far the greatest number of invasions, however, occur in the seventh, eighth or ninth year, but especially in the seventh. In the elderly and bald-headed in whom the piliferous follicles are atrophied or have disappeared, favus is almost never developed on the scalp. The soles of the feet and palms of the hands also enjoy immunity from this disease.

Favus is a contagious disease, and is readily communicated among children who make use of the same comb or brush, especially if any slight excoriation happen to exist on the scalp. In the first edition of this work I quoted a remarkable instance of the inoculation of favus. Here is a second of the same kind. A woman living in the Rue de Bucherie, was in the daily habit of carrying about one of her children who laboured under favus. She was by and by attacked on the forearm that supported the head of the child, with a small cluster of favus, the yellow, dry, and cupped incrustations of which were perfectly characteristic. This woman and her child had been sent to me by Messrs. Olivier (d'Angers) and Bricheteau, who had satisfied themselves, before I saw the cases, that no pustules or crusts of favus existed on any part of the body. The disease in this instance, evidently contracted by contagion, was removed by rubbing the parts affected with the nitrate of silver. The Messrs. Mahon have also published several remarkable cases of favus transmitted by contagion. Several others may be found in the *Journal Hebdomadaire*, tom. iv, p. 72. This disease is held sufficient cause of exemption from military service in France.

I have farther to add, that the same law which obtains in the case of many other diseases, transmissible by contact or inoculation, holds

(a) Mr. Erichsen (*op. cit.*) believes favus to be a modification of tubercle.

“Favus, in its elementary form, differs from pustule,—1st, in the favous matter being poured out upon a free surface, and not upon or within the cutis, and under the cuticle:—2d, the favous tubercle is frequently chronic, existing in an imperfectly developed state for a length of time, which is never the case with pustule. Favous matter differs from pus,—1st, in concreting very quickly after it is poured out, even before exposure to the air:—2d, in its chemical composition; favous matter containing much more earthy salts, and coagulated albumen, than pus. Favus and tubercle agree in their seat [the lining membrane of the hair-follicles appearing to Mr. E. to partake, in a great measure, of the characters of mucous tissue], in the manner of their formation (both being eliminated in a fluid state, but solidifying very quickly,) in their mode of growth (by eccentric deposition, and not by any increase from within), in form, colour, and chemical composition; in most of the causes that predispose to, or excite them; in the age at which they most frequently occur; and in the colour of the cicatrices which are left.” (p. 117.)

good in regard to the contagion of favus. The application of the crusts of favus to the skin is not invariably followed by the inoculation of this disgusting disease.<sup>1</sup>

Favus *confertus*, or pustular ring-worm (*porrigo scutulata*, Willan,) commonly attacks children from the age of two years to the time of puberty. Willan had seen one child in a school communicate the disease to fifty others in the course of a month. In this instance he condemns, with great reason, the filthy practice, so often pursued in establishments for the education of youth, of using the same comb for the whole of the children. I once attended a little boy, five years old, affected with this eruption whose mother contracted a number of pustules on her fingers from washing his head twice a day with an emollient decoction. The two sisters of this child, with whom he was constantly in contact, were attacked with similar pustules on the upper lip, and on the fingers.

Neglect of proper cleanliness, and the presence of some other inflammatory affection of the hairy scalp appear to predispose to both varieties of favus; the disease may also arise spontaneously, and independently of contagion. According to the Messrs. Mahon, annular favus is a more frequent disease in the south than in the north of France. The complaint is very common in England.

550. *Diagnosis.*—Eczema, impetigo, and pityriasis of the hairy scalp, have at different times been assimilated with favus, and described under the same generic name of *tinea*. To have escaped this error, it would have been enough to have reflected that the former diseases do not alter their nature from being evolved on the scalp, and that favus occasionally appears exclusively on the trunk. Had there been even a total want of general features distinguishing it from these diseases, the contagious nature of favus ought to have prevented pathologists from associating it with such affections as eczema and impetigo. Of all the diseases of the skin, however, favus is the one the external characters of which are without dispute, the least equivocal. No other affection is characterized by the evolution of minute pustules which do not rise above the level of the skin, and no other is proclaimed on the exterior by dry, circular, cup-shaped incrustations.

In the hope of obtaining exemption from military duty, attempts have frequently been made by the young men in France to simulate favus, by producing with the nitric acid yellow stains or eschars on the hairy scalp; but these spots want the characteristic depression in their centre, and no one familiar with the appearance of the actual disease could possibly be duped by such artifice. The small pustules of favus *confertus* (*porrigo scutulata*) buried in the skin and covered with incrustations almost from the moment of their formation, cannot be confounded with the pustules of impetigo, the secretion of which does not form true crusts till after the lapse of several days, and then the majority of them are rounded and much less adherent to the skin than those of favus. Farther, impetigo is not contagious, and rarely causes the loss of the hair, whilst favus on the contrary is propagated by the powder of its incrustations, and frequently occasions baldness. The red patches of herpes *circinnatus* at the commencement, and those of lepra divested of their squamæ might be mistaken, if cursorily examined, for the red spots which precede the appearance of the crusts of favus *confertus*; but these crusts by their formation speedily dissipate all doubt on the subject.

551. *Prognosis and Treatment.*—Favus may get well spontaneously after a continuance of several months, or terminate naturally by the fall of the hairs of the affected follicles. Most frequently, however, the disease, abandoned to itself, continues unmitigated for several years. It is in general so much the less under the control of treatment, as it implicates a larger extent of the surface of the scalp, and as it is complicated with other more serious diseases.

When favus is evolved spontaneously towards the decline of an acute or chronic affection of some severity, or when it has attacked feeble and weakly children whose health has improved since its appearance,—in these rare cases all treatment must be indefinitely suspended. By this advice I would not be esteemed as giving in to the opinion of an English writer who has classed favus among those cutaneous diseases which exert a salutary influence on the constitution; I am satisfied, on the contrary, that favus almost always interferes with

<sup>1</sup> Gallot. *Recherches sur la teigne*, p. 64, et suivantes (premier, deuxième et quatrième faits), 8vo. Paris, an. xi.



the due development of the physical powers and the moral and intellectual faculties of those children who have been long and severely affected with it. If some cases of serious disease supervening on the cure of favus have been quoted, an infinitely greater number of instances of improved health and of greater vigour of constitution have been recorded after recovery from this disgusting disease. To secure these happy consequences, the regimen and plan of life pursued by patients require particular attention, especially when the disease appears among individuals of scrofulous constitution and who are suspected to have tubercles in their lungs.

552. If favus has appeared exclusively on the trunk, or on the extremities, in consequence of direct exposure to infection, and the scalp continues exempt, the disease in the majority of instances, will be found to yield to the use of plain, alkaline or sulphureous bathing. If the whole of the disease consists in a few scattered incrustations, after having succeeded in removing these, the parts affected must be touched with the nitrate of silver. The black crusts or eschars produced by the action of the caustic, become depressed or cup-shaped, like those of favus, and after their fall, leave a more superficial circular red mark, which is itself effaced before long. In some obstinate cases the concentrated acids—the nitric, sulphuric, and hydrochloric acids, have occasionally been employed as escharotics with advantage.

Favus of the hairy scalp, is an infinitely more rebellious disease than that of the trunk and extremities. The number of cases in which the simple warm bath, emollient fomentations and douches, alkaline or sulphureous baths, and washes of artificial mineral waters, might be employed with advantage, would be much more considerable, were we summoned to treat favus shortly after its invasion. General bathing, fomentations with linseed tea, and the application of emollient cataplasms to the head, after it has been carefully shaved, are very efficacious in removing old incrustations, and in lessening the redness of the skin, especially when the eruption is confluent; alone, however, these measures seldom accomplish a complete cure. This happy issue is less rarely brought about by the additional action of a couple of blisters applied to the arms, and kept open for two or three months. In the year 1817, I made a great many trials of this mode of treating favus, which is free from the dangers with which various other plans of treatment have been taxed.

In old standing cases of favus of the scalp, every method of treatment into which the avulsion or removal of the hair does not enter as an element is incomplete and unworthy of being entitled curative. The depilation in this case, is a measure as indispensable, as is the removal of the nail in certain varieties of onychia. This is the circumstance with which those physicians and surgeons have been struck, who have dwelt on different *depilatory methods of treating favus*.

The oldest system of this kind, consisted in tearing out the hair violently by means of some adhesive plaster, which was applied or spread over the scalp. To prepare this plaster, it was customary to mix four ounces of rye flour in a pint of cold white-wine vinegar; the mixture was set upon the fire and stirred continually, whilst half an ounce of the deuto-carbonate of copper (verdigrise) in powder, was added; it was boiled for an hour, after which, four ounces of black pitch, the same quantity of rosin, and six ounces of Burgundy pitch were added. When all these ingredients were melted and incorporated, six ounces of antimonial ethiops in fine powder (an alloy of mercury and antimony, obtained by long trituration), were thrown into the mixture, which was stirred till it had acquired what was held a proper consistency. The plaster thus prepared, was spread upon a stoutish black cloth, which was slit in different directions before being applied, to prevent it forming any crease, and to admit of its being subsequently removed in stripes.

The plaster was applied to the head, after having got rid of the incrustations by softening them with cataplasms, and having clipped off the hair as close to the skin as it could be done with scissors. After the lapse of three or four days, the plaster was removed rapidly the contrary way of the hair, and a second was put on, which was likewise removed in the same manner three or four days after its application. The plaster was subsequently renewed every second day, taking care to have the head shaved, when this measure appeared necessary. As may be conceived, and as was intended, these plasters each time they were renewed, tore out a quantity of hair more or less

considerable. The first applications were attended with cruel sufferings; the agony became less and less severe as progress was made in the treatment. Nevertheless, the pain was still so great at a month's end, that children might be heard screaming dreadfully when the plaster was removed; after the third month, the pain of the dressing became less intolerable.

It is undeniable, that by this method a certain number of cures were obtained, and these in severe cases, and after various other remedial measures had failed. But the action of the pitch-plaster cannot be kept confined to the diseased hairs only, and the avulsion of the healthy hair is both unnecessary, and extremely painful. In connexion with this procedure, I shall only add farther, that the Messrs. Mahon inform us, that they saw a child die two days after having had this horrible operation performed on its scalp.

With a view to avoid the extreme pain attending the process of tearing out a great many of the hairs in the same moment of time, we have been recommended to extirpate them one by one by means of a small pair of forceps contrived for the purpose.<sup>1</sup> But this procedure which lasts infinitely longer than the other, is in itself excessively painful when the hairs still adhere to their bulbs; and, indeed, can only be employed in those rare cases in which favus is confined to a very small portion of the scalp.

Of all the *depilatory* methods proposed, that of the Messrs. Mahon is unquestionably the best. The effects of their procedure are to cleanse the surface of the hairy scalp, to keep it in a state of the greatest freedom from all impurities, to modify the diseased skin in a very beneficial manner, to cause the fall of the hair without pain, and to be invariably followed by recovery.

554. The Messrs. Mahon begin their treatment by having the hair cut off at the distance of about two inches from the surface of the scalp; it is not made shorter, in order that it may be the more readily caught, and removed when loose, by the comb; the incrustations are got rid of by means of hog's-lard and poultices of linseed flour; the head is then washed with soap and water. The same process is repeated during four or five days in succession, or until the surface of the scalp appears quite clean. The second step is then taken in the treatment, the end of which is to accomplish gradually, and without the infliction of pain, the fall of the hair over all the places affected with favus. These parts are anointed every day with a depilatory ointment; and this application is continued for a longer or shorter time according as the disease is inveterate or more slight and recent. On those days on which none of the depilatory preparation is applied, a fine comb is passed repeatedly through the hair, which is found to fall out without pain. After this treatment has been continued for a fortnight, a few pinches of a depilatory powder are scattered amongst the hair once a week, the comb being carefully used to the diseased parts the day after, and a fresh quantity of the depilatory ointment applied. This procedure requires to be continued during a longer or shorter space of time according to the state of the disease. The same system is pursued during a month or six weeks, when more active depilatory agents are employed over the parts affected, every day for a fortnight, and subsequently twice a week so long as any redness of the skin remains.

555. Between the year 1807 and 1813 four hundred and thirty-nine individuals of the female sex, attacked with favus, were successfully treated according to this plan, at the Bureau central des Hôpitaux de Paris, the mean time of each case continuing under treatment being fifty-six days. During the same interval four hundred and sixty-nine boys were cured by the same means, the mean term of the treatment extending to fifty-three days. The hair was found to be regularly reproduced on those parts that were thus artificially made bald, when the progress of the disease had not destroyed the piliferous bulbs.

Numerous cases detailed in the books of the Bureau central, prove farther that favus which had resisted various other methods of treatment yielded to this. Among these are instances in which even the severest measures had been fruitlessly pursued for one, two, four, five, and even six years.

As a substitute for the *pommade épilatoire* of the Messrs. Mahon, the

<sup>1</sup> By Mr. Plumbe.



composition of which they have not made publicly known, the subcarbonate of potash or soda, in the proportion of one or two drachms to the ounce of hog's lard, may be advantageously employed, the affected parts being rubbed during ten minutes every day with this ointment. If the integuments appear considerably inflamed, the parts may then be washed with a solution of two drachms of the subcarbonate of potash in a pint of water, and the hair will speedily be detached without pain.

556. An immense number of topical applications, some of them almost inert, such as charcoal and the black oxide of manganese, others possessed of more or less active properties, such as poultices of hemlock, of mulberry-leaves, dulcamara, &c., ointments of cantharides, of the nitrate, and of the proto-chloride of mercury; blisters; solutions of the sulphate of zinc, sulphate of copper, sulphate of iron, deuto-chloride of mercury, and nitrate of silver, sulphuret of potash (1 dr. to 1 lb. of distilled water), and of the same salt combined with white soap, lime-water, and alcohol (R. potass. sulphuret dr. ii. sapon. alb. dr. i½; aqu. calcis ʒvii; alcoh. rectific. dr. i); the *Pommade de Banyer* (R. oxid. plumb. semivit. ʒiii, alum. calcin. ʒiss; proto-chlor. hydrarg. ʒiss adepis, lbs. ii; terebinth. venet. lb. ss); the ointment of the ioduret of sulphur, &c., &c., have all been recommended in the treatment of favus of the hairy scalp, but with such various and uncertain success, that none of them can be put in competition with the procedure adopted by the Messrs. Mahon.<sup>1</sup>(a)

(a) Of local applications in favus *confertus* or *porrigo scutulata*, Dr. Wigan (*Medical Gaz.*, 1843, and *Bullet. Med. Science*, 1844), declares concentrated acetic acid to be by far the best, and of itself all sufficient. He was not aware that Bateman, in one edition, refers, in a note, to the use of vinegar by Oribasius and Ætius, by the achores and in that brought out by Dr. A. T. Thomson, after speaking of the good effects of the application of sulphuric acid, he adds: "The acetic acid, or aromatic vinegar, which acts as a more gentle, yet very effectual caustic, has proved an effectual remedy in a few instances."

Dr. Wigan's method is thus described: "Unless the quantity of hair on the head is exceedingly small and offers no obstacle to the complete examination of the skin, I insist on the head being shaved very carefully, twice.

"The reason is obvious: with a moderate quantity of hair you may be curing the parts which first attract notice, while others which have been infected are gradually progressing to a visible disease, and the cure is thus indefinitely prolonged. I do not, however, object to a little circlet of hair round the face if there be no sign of disease apparent in it, and if it be carefully washed with hot common vinegar. This is a concession to parental vanity which may be safely made, and without which sometimes it would be impossible to obtain confidence.

"My remedy is Beaufroy's concentrated acetic acid—pyroligneous acid, as it is still called—though no longer made from wood.

"As a preliminary, however, I use the acid diluted with three times its weight of water. I call this the detector acid.

"On its application a number of spots which looked perfectly healthy become red patches. They are indications that infection had been taken, but had not gone through its stages, which period I believe (after great experience) to be eight days. This assertion is not lightly hazarded.

"Having by this reconnaissance ascertained the numbers and position of your enemy, your course is clear. One vigorous assault, and there is an end of the matter. With a picce of fine sponge, either tied to the end of a stick or held in a pair of silver sugar-tongs, I imbue each spot thoroughly with the concentrated acid for the space of three or four minutes, and the business is finished.

"The only reason why it is necessary to see the patient again, is, that as a crust is generally formed, and as an appearance of "worsen-

<sup>1</sup> Any plan which combines the removal of the hair by gentle means, that is to say, after it is already loosened from the roots, with undeviating attention to cleanliness for about two months, will be found generally to cure favus. I have seen more than one case of this disease get well by the regular use of simple soap and water, with the employment of the small toothed comb night and morning for a month or six weeks. Patience, perseverance, and cleanliness, are the sheet anchors in all the successful plans of treating this obstinate disease, as they are evidently in that pursued by the Messrs. Mahon.—R. W.

### Historical Notices and particular Cases.

557. Favus was long conjoined, and even confounded with different other chronic inflammatory affections of the hairy scalp, under the

ing" takes place, the friends require to have their confidence renewed from time to time by explanation and encouragement. I have often applied the acid more than once, but it was always (I firmly believe) unnecessary, when the preliminaries above stated had been gone through properly upon the shaved and tested head.

"The crust gradually grows up with the hair, which soon sprouts again if the eruption be recent, and as soon as a pair of fine scissors can be inserted underneath, it should be removed; but this should not be done prematurely, lest a sore place be produced.

"When first proposed, a good deal of correspondence took place respecting the plan with those who had tried it without success. I found, however, that in every case they had either used a much weaker acid (it is sold of all strengths), or that they had continued the use of it long after the disease was cured, and thus produce that not very rare result, 'disease of the doctor.' In the latter cases it was only necessary to discontinue the acid, and wash the head with warm water."

Certain new remedies in the treatment of favus and psoriasis are described by Mr. Wilson, and from his work I derive the following notices:—

"ON THE PREPARATION AND THERAPEUTIC VIRTUES OF ANTHRAKOKALI.—ANTHRAKOKALI was introduced by Dr. Polya, of Pesth, about two years back, as a specific in certain diseases of the skin, and was made the subject of a short treatise by Dr. Jacobovics. It was administered by Dr. Polya as an internal medicine, and was especially employed against tettery affections, which this gentleman conceived to originate in a peculiar constitutional disorder. Anthrakokali, in the hands of Dr. Polya, produced the same specific effects, in relation to the tettery principle, that mercury effects in the case of syphilis, sulphur in the instance of scabies, and iodine in that of scrofula.

"According to Dr. Polya, anthrakokali acts upon the entire system, producing a temporary increase of the local affection. It gives rise also to violent perspirations, and produces a general state of feverishness, under which the disease is cured. Thus it would appear, that by exciting a disease greater than that which it is employed to cure, it works its beneficial effects.

"On the reputation which this substance obtained in the hands of Dr. Polya, Gibert made trial of it in Saint Louis. Administered internally, he obtained none of the marked results described by its proposer; and after a fruitless experiment of several months' duration, gave it up as useless. Gibert next used anthrakokali as a local application, in the form of ointment: he found it less stimulant than the ordinary alkaline ointment, but yet sufficiently resolute. As a general principle, he remarks, 'the anthrakokali is a stimulant well suited to those cases in which we commonly employ sulphur and alkalies. It can only be used in the second stage of tettery affections—namely, in that in which the acute period has yielded to the chronic state, the latter being, nevertheless, subject every now and then to re-excitement.' For this reason, we find him lauding the effects of the anthrakokali, in a case of psoriasis inveterata, which had assumed an inflammatory activity under the use of an ointment of ioduret of ammonia. Thus, it would appear, that the anthrakokali deserves a place only among our more common stimulating applications, and is to be resorted to in cases where moderate stimulation is alone required, or where the morbid surface has become used to other forms of stimulant.

"My own practice is a complete corroboration of the results obtained by Gibert. I have not ventured to use the remedy internally, after perusing the account given of its effects by Dr. Jacobovics, but I have found it an ordinary stimulant as a local application. An additional stimulant is, however, often of considerable value in our treatment, after we have employed without success the forms which we are most accustomed to prescribe. I have frequently observed a morbid surface, which has remained unchanged for weeks under the use of a given resolute, suddenly assume a favourable aspect when treated by another with which the tissues are less familiar.



generic titles of *tinea* and *porrigo*. The translators of the works of Haly Abbas appear to have indicated favus under the name of *tinea*

"The mode of preparation of anthrakokali is as follows:—

R. Carbonate of potass . . . 180 parts  
Boiling water . . . . . 2500 "

After the solution of the alkaline salt, add hydrate of lime, in sufficient proportion to leave the potass free. Filter the fluids, and evaporate in an iron vessel until the surface assumes the appearance of oil. Then add 150 parts of coal in fine powder, stirring it with the liquid until it be well mixed. The iron vessel is then to be removed from the fire, and the stirring is to be continued until the contents are converted into a black homogeneous powder. The anthrakokali should then be placed in well-stoppered bottles, in a dry place, in order to exclude moisture.

"Dr. Polya also prepares a sulphuretted anthrakokali, by adding with the coal fifteen parts of sulphur also, in fine powder. This latter preparation is more active than the simple anthrakokali.

"Anthrakokali is deliquescent, and very soluble in water. Its solution is of a deep brown colour, throwing down a black flaky precipitate with a mineral acid. The colour of the solution of the sulphuretted anthrakokali is blackish-green.

"Dr. Polya asserts, that the anthrakokali is a chemical compound of potass and coal, and that in the form of solution, the latter is actually dissolved in the water. The test of this solution is the continuance of the fluid of its brown hue, without the occurrence of any precipitate. Gibert, however, denies this chemical combination, and regards it as a simple mechanical admixture. The coal, he says, separates from the fluid by precipitation, until the latter loses the whole of its colour, and none of the former remains behind.

"Dr. Polya prescribes two grains of the powder, three or four times a day in liquorice powder, or carbonate of magnesia. The ointment prepared by Gibert consists of

R. Anthrakokali, gr. xvj.  
Axungia, 3j.

M.

To be applied with or without friction, as the case may demand, twice in the day.

"ON THE PREPARATION AND THERAPEUTIC VIRTUES OF FULIGOKALI.—Soot has long enjoyed a reputation as a stimulant remedy in chronic diseases of the skin; it has for many years been used as a popular application in diseases of the scalp, and very recently has been recommended with much praise in the treatment of favus.

"Fulgokali is a compound of soot and potass, in imitation of anthrakokali. It was first prepared by M. Deschamps, a chemist of Avallon, and has been made the subject of experiments, attended with considerable success, by M. Gibert, in Saint Louis. M. Gibert has employed the fulgokali both internally and externally, and finds it superior to anthrakokali. As an external application, in the form of ointment, it is resolutive, detersive, and stimulant.

"The mode of preparation of the compound is the following:—

R. Caustic potass . . . 20 parts  
Soot . . . . . 100 "  
Water . . . . . q.s.

Boil the mixture for an hour; cool, filter, evaporate, and dry. The fulgokali is obtained in the form of scales or powder, and must be kept in well-stoppered bottles in a dry place.

"A sulphuretted fulgokali is obtained by the following process:—

R. Soot . . . . . 60 parts  
Caustic potass . . . 14 "  
Sulphur . . . . . 4 "

Heat the sulphur and potass with a little water, and after their solution, add the soot. Evaporate, dry, and close the resulting compound in well-stoppered bottles, and keep it in a dry place.

"The ointment used by M. Gibert is composed of a scruple to half a drachm of the salt to an ounce of lard. In larger proportion it is highly irritating.

"Soot is a substance which is variable in its composition, and must differ according to the circumstance of being procured from the combustion of wood or coal. Its principal constituents are:—

Acetate, sulphate, and carbonate of lime,

lupinosa;<sup>1</sup> a denomination which has been adopted by Willan, who has described a second variety of favus, which appears in the shape of clusters or rings under the name of *porrigo scutulata*.<sup>2</sup> M. Alibert<sup>3</sup> has given a good description of favus, on the characters of which Messrs. Gallot,<sup>4</sup> Cooke,<sup>5</sup> Luxmore,<sup>6</sup> Plumbe,<sup>7</sup> and Mahon,<sup>8</sup> have published interesting observations. I have given a drawing of a remarkable case of this disease, in the atlas of pathological delineations illustrative of this work.

The seat of the eruption of favus has been placed by Fr. Bayle<sup>9</sup> in the subcutaneous cellular tissue, and with greater reason in the hair-bulbs by Astruc,<sup>10</sup> Murray,<sup>11</sup> and M. Baudelocque.<sup>12</sup>

An analysis of some of the secret remedies of the Messrs. Mahon, has been published by M. Braconnot.<sup>13</sup> Many cases of the disease have been detailed, and numerous remarks on its nature inserted in various periodical publications.<sup>14</sup>

CASE LXXXV.—*Favus in a child at the breast; treatment by Messrs. Mahon.* C. M. Charesse, aged three months, was brought to the *Bureau Central*, on the 14th of February, 1826. This child had been attacked with favus a month after her birth. On the left parietal region, there was an incrustation two inches in diameter, of a pale yellow colour, dry, prominent, presenting numerous cupped depressions, and evidently formed by the agglomeration of numerous favous scabs. There were besides several other incrustations of smaller dimensions on different parts of the head.

The child was in excellent health. Entrusted to the care of the practitioners mentioned, the incrustations and hair over the affected parts were removed within ten days, without any pain. The skin then looked red, dry, and shining, but free from sores or cicatrices. No fresh crop of pustules was developed, and a very short continuance of the treatment was found sufficient to complete the cure.

CASE LXXXVI.—*Favus cured by emollient applications and blisters.* A female infant, of very weakly constitution, and whose mother had died consumptive, was returned to its surviving parent, affected with scalled head, four months at least before the time at which I saw it.

Hydrochlorate of ammonia,  
Chloride of sodium,  
A brown, bitter, extractive matter,  
An empyreumatic tar,  
A bitter, volatile oil, possessing a strong odour of soot,  
A fatty matter, containing oleic and stearic acid,  
Carbon.

The potass solution dissolves the volatile principle of the soot, together with its aqueous extract. It contains, consequently, its active principles.

"It is probable that both the anthrakokali and the fulgokali owe much of their therapeutic value to the alkali which forms their basis. I have employed the fulgokali in several cases, and particularly in psoriasis palmaris, and with better success than I had obtained by the usual remedies."

<sup>1</sup> Quinta est species, Lupinosa, sicca et colore alba, lupino similis, a qua quasi cortices et squamæ fluunt albæ (Haly-Abbas, Theorice, lib. viii. cap. 18).

<sup>2</sup> Willan. A practical treatise on porrigo, 4to. Lond. 1814.—§ porrigo lupinosa—§ porrigo scutulata (Scald head or ringworm of the scalp).

<sup>3</sup> Alibert. Précis théorique et pratique des maladies de la peau, t. i. p. 3.

<sup>4</sup> Gallot. Recherches sur la teigne, 8vo. Paris, 1805, p. 14, et suivantes.

<sup>5</sup> Cooke. A practical treatise on tinea capitis contagiosa, 12mo. Lond. 1810.

<sup>6</sup> Luxmore. Observ. on the nature and treatment of linea capitis, or scald head, 12mo. Lond. 1812.

<sup>7</sup> Plumbe (Sam.). A pract. treatise on diseases of the skin. London, 1824, p. 41.

<sup>8</sup> Mahon. Recherches sur la siège et la nature des teignes. Paris, 1829, 8vo. Art. Teigne favueuse.

<sup>9</sup> Bayle (Fr.). Problemat. physic. medic., 87.—Bonet. Sepulcretum. lib. iv. sect. xii. addit. obs. vi.

<sup>10</sup> Astruc. De tumoribus, p. i.

<sup>11</sup> Murray. Pr. de medendi lineæ capitis ratione paralipomene. Goetting., 1783.

<sup>12</sup> Baudelocque. Recherch. anatom. et médic. sur la teigne favueuse. (Revue médic. Paris, Octobre 1831.)

<sup>13</sup> Bulletin des sciences médicales de Férussac, t. xxii. p. 409. The analysis is in the following words: The powder No. 1 of the Messrs. Mahon, is composed of wood-ashes procured from firewood in the usual way. The powder No. 2 is composed of the same ashes, with a little reddish sand coming from the fireplace. The powder No. 3 resembles the preceding one last described. An impure sub-carbonate of potash consequently. R. W.

<sup>14</sup> Journ. hebdomad., t. iv. p. 72.—Revue médic., Juin 1830, p. 345.—Gaz. médic., 1831, p. 321.—Gaz. des hôpitaux, 1833, p. 174.



On different parts of the hairy scalp, about thirty favous crusts could be counted. These were nearly half an inch in diameter, dry, of a pale yellow colour, prominent, with projecting edges and depressed centres; their superficial layers were whiter and more friable than their deeper parts, and they varied from one to several lines in thickness. The skin which surrounded them was neither red nor inflamed. Many of them were traversed by hairs. When they were detached, the corion under them was found red and slightly moist. Two small pustules existed on the parietal region, which scarcely passed the level of the integuments, and were covered with a slight scab on their apices. The head was shaved, and the affected regions covered with a linseed-meal poultice. The crusts soon became soft, and were easily removed; I bathed the tender parts regularly every day with a decoction of linseed. Before a week had elapsed, the surface of the scalp was rendered perfectly clean. I then applied a blister to each arm; these were kept open for three months. The fomentation was continued every day, and the favus was completely cured without any depilatory or other means than those mentioned, being tried. The blisters were then allowed to heal up, but in a very gradual manner.

CASE LXXXVII.—*Favus transmitted by contagion.*<sup>1</sup> An *Officier de Santé* was consulted in behalf of two little girls, whose cervical and sub-maxillary lymphatic glands were enlarged. He conceived that this state was induced by *tinea*, which had not been expelled from the system, and pursued a method of cure based upon this assumption. The poultices which had been applied to procure the removal of the incrustations of favus of the scalp, under which two sisters laboured, were actually applied to the heads of these poor children, one of whom was nine, and the other six and a half years old. These poultices were kept applied for a week, and were softened by being sprinkled every day with warm water, and covered with a fresh poultice externally; they became at length so offensive, that they had to be removed. On the sixth day, a number of small white pustules were perceived on the scalp of the younger child, which, on being pricked, discharged a whitish purulent fluid, and in the course of a few days, became covered with light gray scabs.

It was not till six days after the removal of the cataplasms, that a small red spot was perceived nearly at the distance of two inches from the incrustations mentioned. This spot, after a couple of days, was observed to be full of pus, which in concreting formed a very dry favous scab, the size of a millet-seed, circular in its shape, raised at its edges, and depressed in its centre;<sup>2</sup> it extended gradually, so as to be two lines in diameter at the end of eight days, and more than four lines after the lapse of two months.

The elder child did not contract favus; and the parents after a long perseverance in the poultices, perceiving that the enlargement of the glands did not disappear, consulted a physician, who prescribed a course of remedies adapted to scrofulous cases.

CASE LXXXVIII.—*Ulcerated favus; complications; death.* A. Courtet, aged three years, had been long affected with favus, when he was admitted to the Hôpital des Enfants malades, on account of pneumonia of both lungs, and a chronic affection of the cæcum and colon. The child was exhausted by this complication of diseases. He looked wan, and was emaciated to the last degree. Consumed by hectic fever, the child was evidently sinking fast. The favus, already of long standing, was in a state of ulceration, and a fortnight after his reception, he died. *Sectio cadaveris.* The hair is thin. On the surface of the scalp appear: 1, several favous incrustations well characterized, cup-shaped and very adherent to the skin, which is red, and inflamed beneath them; 2, a large incrustation on the top of the head, nearly three inches in diameter, prominent, presenting several cup-shaped depressions, and evidently formed by the agglomeration of several favous crusts; 3, in front of this larger incrustation, the skin presents a perforation nearly an inch in diameter. The subcutaneous structures in the vicinity of this perforation are destroyed, and to an extent so much the more considerable, as they are nearer to the bones of the cranium.

The sub-mastoid lymphatic glands are red and swollen. Petechiæ and ecchymosed spots are conspicuous over various parts of the body. The ventricles of the brain are distended with serum. The trachea and bronchi are flooded with a yellowish mucus. Both lungs are

hepatized. The mucous membrane of the large intestines presents a number of grayish spots, and that of the lower part of the rectum is affected with several ulcers; in the cellular substance behind, and to the right side of the gut, a small abscess full of grayish-coloured purulent matter is discovered. (a)

(a) *Cases of favus related by Dr. Carswell in the Lancet (1839).*—"Of the five cases of diseases of the skin to which I propose to direct your attention to-day, there are, as I have said, two of porrigo favosa, the only two cases of this kind we have had in my wards during the last six months. One of the cases was an example of the worst form of porrigo favosa; that is to say, of great extent and of long duration. The other was more limited, and of much shorter duration. There was no difficulty in recognizing the physical characters of the disease in either, although they were much more marked in the former than in the latter, both as to the cup-shaped appearance and colour of the pustules, and the patches formed by their extension and subsequent union. But as some of you may not be aware of what constitutes the elementary character of porrigo favosa, I may repeat what I stated on a former occasion, that this contagious pustular affection of the scalp consists in the presence of what is called the *favous pustule*. This pustule is formed by the deposition of a minute quantity of pus, which concretes almost immediately into a pale yellow or straw-coloured substance, having a defined circular edge, hardly, if at all, rising above the surface of the skin, and surrounded by a slight blush of red. The successive effusion and concretion of the matter proceed from the centre towards the circumference, in which direction they accumulate, and thereby raising the circular edge of the crust, and giving to it that *cup-shaped* appearance by which it is recognized. The size of these crusts or concretions, varies from one to two lines, to half or three-quarters of an inch in diameter. They are distinct at the commencement, but become confluent during their progress, and are sometimes confounded together into a large, dry, brittle mass, resembling a mixture of sulphur and plaster. Even in this state, however, of agglomeration, traces of the primitive or elementary character of the disease are perceptible, viz., numerous round or irregular depressions, indicating the situation and number of the original favi. The most of these appearances you will recognize in the description given of the following case of porrigo favosa.

"William Tobin, æt. eighteen, was admitted on the 6th of April. He is of a scrofulous habit and sanguineous temperament, and has enjoyed very good health, with the exception of headache, induced by the eruption on the scalp, which first appeared eight years ago, and has continued up to the present time, gradually getting worse, being attended with considerable itching and smarting, especially in warm weather.

"On admission, the head was the seat of an extensive eruption, occupying the upper, anterior, and posterior parts, and the patient stated that at one time it extended over the eyebrows. On all these parts the eruption does not present the same characters. On the upper, anterior, and lateral parts of the head, towards the temples, it presents the characters of porrigo favosa; over the occiput, those which bear a resemblance to the granular form of impetigo. On this part the hair is plentiful, but short and crisp, whereas on the former parts few traces of it remain. The most advanced part of the favus eruption presents patches, distinct from each other, five in number, and from one to two inches in diameter, of an irregular, but somewhat circular figure. The margin of each patch is uneven, thick, and elevated; its surface rough, dry, and fissured, of a yellowish-white colour, very much resembling a mixture of sulphur and mortar, more elevated in some parts than in others; of a loose texture, and in many places cellular, assuming the appearance of honeycomb. Besides these large patches, constituting the advanced form of the disease, and the result of the accumulation of the concrete secretion, and agglomeration of the original pustules, these latter are seen in a few situations, presenting their elementary characters; that is to say, they appear in the form of small, flat, straw-coloured pustules, quite distinct, with an elevated border, depressed centre, and slightly inflamed base. The intervening skin over a great part of the scalp is red, in several parts greatly congested, and traversed by numerous varicose vessels. There is considerable itchiness, but no great heat. Nume-

<sup>1</sup> Gallot. Rech. sur a teigne, 8vo. Paris, 1805.

<sup>2</sup> This spot (*bouton*) was certainly a pustule of favus.



rous large pediculi burrow in the fissures and sulci of the larger patches, and among the roots of the hair, on the posterior part of the head. The whole surface exhales an offensive and nauseous odour.

"The lymphatic glands of the neck and left axilla are greatly enlarged and very hard. The general health is pretty good; appetite very good; tongue clean; bowels regular; urine not albuminous; impulse of heart too strong and too extended.

"From the remarks I have made on the elementary characters of this form of pustular eruption of the scalp, you will readily recognize in the description of this case, the *porrigo favosa*. There is no other pustular eruption with which it could be confounded, except the *porrigo scutulata*; and here the mistake would be of little importance, as it is a disease of the same nature, similar in its elementary characters, arising, like the former, in the favous pustule,—communicable, like it, by contagion, and requiring the same means of treatment. The *porrigo favosa* is a disease which, when once seen, can hardly ever be confounded with any of the other and more common non-contagious pustular eruptions of the scalp; all its physical characters are so peculiarly well marked, and leave a defined and lasting impression on the mind. Those of you who have not seen this case when the patient was admitted, and before the incrustations were removed, may now obtain an accurate idea of the original appearance of the disease, so faithfully represented by Mr. Tuson in the wax model before you.

"The extent of the disease in this case, the great length of time which it had existed, and especially the extremely unhealthy condition of the scalp in general, were circumstances which combined to render the cure both tedious and difficult. It is easy to remove the incrustations, however extensive, by repeated poulticing; but the morbid condition of the tissue of the scalp, and of the bulbs of the hair, often resist, for a long period, the most assiduous and judicious use of remedies. It is not so much the reproduction of the original disease that retards the cure, as the repeated production of other pustular and vesiculo-pustular eruptions, the consequence of the diseased state of the skin. It is this latter, therefore, which we have chiefly to combat in bad cases of *porrigo favosa*, and to which, in this case, after the removal of the incrustations, the principal part of the treatment has been directed. After the application of poultices for two days, the scalp was completely cleansed of the incrustations. The hair was clipped short, and for some time the poultices were continued during the night, and the water-dressing applied during the day. Under this simple antiphlogistic treatment, considerable improvement followed, and was afterwards farther advanced by the occasional application of leeches to the most inflamed and congested parts of the scalp. With the same view, and also to diminish the tension and turgescence of the scalp, and effect the obliteration of the vessels with which it was so thoroughly penetrated, scarification, by means of a fine scalpel, was had recourse to, but could not be persevered in to any extent, in consequence of the great pain complained of by the patient. I expected to have derived great advantage from this method of treatment, which I have found extremely successful in chronic cases of circumscribed impetigo of this part of the body, accompanied by great thickening and vascularity of the scalp. It removes the tension of the affected part, diminishes the swelling, empties the enlarged vessels, and affords a free issue to the puriform secretion, which is either infiltrated, or exists in the form of numerous small abscesses.

"During the early progress of the case, copious eruptions of achorous pustules took place from time to time. This was occasioned chiefly by the use of the linseed poultices, and which always happens when not made of the fresh material. This occurrence, however, was obviated by using the potatoe poultice instead, the pustules which now make their appearance from time to time, being comparatively few in number. During the last two weeks, or more, these poultices have been applied at night, and a lotion of the subacetate of lead, or the simple water-dressing, during the day. Leeches, also, from eight to ten in number, have been applied several times, to the most inflamed parts, during this period.

"The improvement which has been effected by these antiphlogistic means has been very considerable; but there is yet much to be done to accomplish a cure of the disease. Although the tumefaction and

vascular turgescence of the scalp have nearly disappeared, there are still much redness and tension, which will require the same means of treatment for some time to come. When these morbid conditions have been still further reduced, and should we retain this patient a sufficient length of time in the hospital, as an in-patient, we may then employ, with advantage, various stimulating, or otherwise, modifying agents, such as alkaline and sulphureous lotions, the nitrate of silver, and other remedies of this kind, which experience has shown to be useful in the last stage of severe cases of *porrigo favosa*.

"In the treatment of this case we have not had recourse to the removal of the hair, recommended by several dermatologists, as a necessary part of the treatment of this disease. I am not disposed to attach much importance to this practice. At all events, the removal of the hair may be accomplished much more easily and speedily by the use of the alkaline ointment, or lotion, recommended by Biett, than by any of the means formerly employed. The ointment may consist of from one to two drachms of the sub-carbonate of potash, or of soda, to an ounce of hog's lard; and the lotion of the same quantity of these salts to a pint of water.

"I may remark, that the parts which were covered by the incrustations remain perfectly bald; the skin is quite smooth and glossy, and presents a somewhat reticulated aspect. Owing to the long duration and severity of the disease, there is no probability that the hair will ever be reproduced. In milder cases this sometimes happens, the new hair, however, having a somewhat woolly and crisp appearance.

"No general treatment has been employed in this case further than attention to the state of bowels, and the use of the iodide of potassium, which was indicated from the scrofulous enlargement of the lymphatic glands of the neck. It is doubtful whether any favourable change has followed its administration. If these glands are less hard than formerly, they are certainly not diminished in bulk.

"*Causes.*—I may say a few words on the supposed causes of *porrigo favosa*. It is, in itself, contagious, communicable by contact; but it occurs in many instances independently of this source, under a variety of circumstances, as to age, sex, and constitution. Biett states that its development is excited under a variety of circumstances, such as a deficiency of the necessary articles of food; misery and filth; living in unhealthy, ill-aired, damp situations. That it occurs chiefly in persons of a soft, lymphatic, and highly scrofulous constitution, although it may be met with in young persons presenting all the attributes of health and strength. Under such circumstances, it is obvious that we are, as yet, ignorant of the real cause of this disease, as well as of that state of the constitution which renders individuals susceptible of its contagious influence; for it is not always transmissible by contact, as has been proved by experiment; and many boys in the same school, equally exposed with those who contract it, escape altogether free from it.

"The second case of *porrigo favosa* is a good example of the disease, occurring in an otherwise healthy child, of five years of age. We have not been able to obtain a full history of the case. The father is said to have had a scorbutic eruption on the face. A brother and sister have had eruptions on the head, but the precise nature of them has not been ascertained.

"The eruption in this child had existed nearly five months, and he was treated for some time as an out-patient. When admitted into our wards, a number of favous pustules, and patches of incrustations, of a pale, yellowish-gray colour, of a brittle consistence, the largest not more than the fourth of an inch in diameter, occupied the upper and posterior parts chiefly of the scalp. They were accompanied by very little redness of the surrounding skin; no exudation, or other morbid appearance of the rest of the head. The general health was good; there was no enlargement of the abdomen, no derangement of the digestive organs; appetite good; sleep natural.

"The elementary characters of the *porrigo favosa* were readily recognized in this case, although not so marked as in the former one. Several of the pustules presented the depressed centre and elevated border; and the incrustations, the dry, plastery look and colour peculiar to them.

"The favourable state of the general health, the limited extent of the disease, and the absence of inflammation of the scalp, except in



## ECTHYMA.

Vocab. *Ecthyma, Phlyzacia* [Papulous Scall].

558. Ecthyma is a non-contagious inflammation of the skin, characterized by largish prominent pustules, seated on a hard, circular, bright-red base.

These pustules, entitled *phlyzacia* by Willan, are almost always distinct, and usually make their appearance in succession, on one or several regions of the body. When they dry up they become covered with thick brown-coloured and adherent crusts: these, after their fall, leave red marks on the skin, the centres of which very commonly present a small cicatrice.

Willan has described four species of ecthyma: *ecthyma vulgare*; *ecthy. infantile*; *ecthy. lividum*; *ecthy. cachecticum*; founded on the various appearances of the eruption, the intensity of the accompanying inflammation, the more or less rapid progress of the pustules, and the state of constitution of the individual affected. These modifications of the disease do not, however, seem to me, to be adopted on grounds sufficiently stable to give them a title to be recognized at the present day as more than mere varieties, and I prefer the simpler and more practically useful division of the disease, into, 1st. *acute*, and 2d. *chronic* ecthyma.

559. *Symptoms.* Ecthyma occurs on every region of the body; but it is principally observed on the shoulders, neck, extremities and breast; it very rarely appears on the hairy scalp. I have seen it forming a kind of belt round the trunk. It occasionally invades almost the whole surface of the body, but is much more frequently confined to a single region.

560. In its most simple, but also rarest shape—that, namely, which is *acute*—ecthyma is proclaimed on some region or regions of the body, (those of the neck and shoulders most frequently,) by large, distinct, hard, conoidal, and painful red elevations, the size of which varies between that of a lentil, and that of a large pea. Their base, which is of a vivid-red, spreads at the same time that the prominence of their summit increases. A purulent point is before long seen in their centre. In this state, the larger pustules bear a considerable resemblance to small boils. When suppuration is fairly established, they often present a little black point, which at a later period is succeeded by a larger brown-coloured crust, very adherent to the skin, and set or incased as it were within its substance. The eruption of the pustules of ecthyma is completed within a few days.

In this mild form of ecthyma, to which the species entitled *vulgare* by Willan, belongs, the crusts are detached within a week or two. After their fall, a few marks, from six to eight lines in diameter and of a livid-red colour, remain on the skin, in the centre of each of which a small cicatrice, having some analogy to that of a small-pox pustule, but differing from it in being shallower, is usually perceived.

On a careful examination of the structure of the pustules of ecthyma at different periods of their development, we find 1, that in their first stage (*red elevations*) there is merely sanguineous injection, with conical tumefaction of the corion; 2. that in the apex, more rarely

the immediate vicinity of the patches, were circumstances which augured a speedy, and, probably, permanent cure of the disease. The incrustations were removed by poultices, and the head cleansed by frequent ablution with warm water and soap. The alkaline ointment was afterwards used for some time to effect the removal of the decayed hair, and also to stimulate the less inflamed parts of the diseased cutis. And, lastly, the nitrate of silver was applied to those points where fresh pustules appeared, or where the skin was excoriated. No trace of the eruption remained at the end of six weeks, except complete baldness of the parts which the former had occupied. Full diet was allowed, and the bowels were regulated by occasional small doses of calomel and rhubarb.

"The success which followed the use of the nitrate of silver in this case, was partly attributable to the circumstance of the disease having ceased to spread, although it certainly also arrested the development of several pustules which appeared during the progress of the treatment."

over the whole surface of the elevations, and under the cuticle, there is an effusion of a certain quantity of purulent serum; 3, that in the third stage, which follows immediately after, there is a kind of pseudo-membranous matter deposited in the centre of the elevation, which is now evidently perforated; 4, that after the voidance of this matter and the removal of the cuticle, the pustule appears under the form of a cup-shaped cavity, surrounded by a hard, thick, puffed edge; 5, lastly, that on the following days this thickened margin subsides, at the same time that a slight cicatrice is formed under the crust, the centre of which is fixed within the point where the perforation had been observed.

When the pustules of ecthyma are coherent, a circumstance that happens but rarely, two pustules thus conjoined may seem to form only one, the circumference of which is irregular in its shape. The epidermis is then raised over a large extent of surface; and if, after having removed this, the purulent serum, with which the epidermis is bathed, be wiped away, two circular and contiguous borders are perceived, in the centres of which a small perforation with a false membrane at the bottom is distinguished.

The development of the pustules of *acute* ecthyma is accompanied by rather severe pain of a lancinating kind, especially when the pustules are clustered upon a single region of the body. The pain in this case seems analogous to that which usually precedes and accompanies shingles. The lymphatic glands in the neighbourhood of these pustules are occasionally swelled and painful.

The pustular inflammation of ecthyma may be preceded or complicated with disorder in the functions of the digestive organs, which occasionally continues after the cure of the disease. It is seldom that this variety of ecthyma is accompanied with fever.

561. *Chronic* ecthyma is a much more common disease than that which has just been described, and consists in several successive eruptions, which appear on the neck, extremities, and occasionally even on the face, at intervals more or less remote from each other. Each of these eruptions presents features in its course analogous to those which distinguish *acute* ecthyma. Whilst several of the pustules are appearing under the form of large red elevations, others are suppurating, and others are drying off and cicatrizing. It is not uncommon for several eruptions of such phlyzacious pustules to take place over different regions of the body within the space of a few months.

Besides this particular mode of making their appearance, the pustules of chronic ecthyma occasionally exhibit peculiar characters. In persons advanced in life, of indifferent constitution, affected with ulcers, &c., very large pustules are occasionally observed to be produced, with bases very similar in appearance to those of furuncles. The voluminous elevations which signalize their earliest stage, have a deep red tint from their first appearance; the skin swells very slowly; the cuticle, distended with a blackish or sanguinolent serum, gives way at the end of six or eight days; the centres of the elevations soften, and become covered with a thick crust, which is prominent, black, very adherent, set, as it were, within a rim of the skin, and is not loosened before the lapse of several weeks.

When this crust is accidentally detached, or when it is removed by means of topical applications, it is found to conceal a small ulcer. Left to itself, this ulcer hardly becomes covered with a fresh scab; its surface discharges a sanious fluid.

These small ulcers may continue open for a very long time, and even spread, especially when they are situated on the lower extremities. When they are at length healed up, they leave cicatrices behind them, which long continue of a livid or violet colour.

In weakly and ill-fed children, attacked with chronic inflammation of the abdominal viscera, or convalescent from small-pox, this variety of ecthyma (*Ecth. infantile*, Willan) is frequently observed with this peculiarity, that the pustules are generally of very inferior size.

562. When there exists but a small number of pustules on the surface, when several successive eruptions have taken place at intervals rather remote from each other, and the disease is altogether uncomplicated, chronic ecthyma is not accompanied by morbid symptoms of a general nature. The rather frequent complication or coincidence of chronic inflammatory affections of the thoracic and abdominal viscera with ecthyma, among children and the aged of



indifferent constitution, explains the circumstance of the generality of authors having spoken of such symptoms as anorexia, pain of the epigastrium, irregularity of the bowels, cough, headache, pains in the limbs, sense of lassitude, loss of muscular strength, &c., as forming part of the disease when it attacks these two classes of subjects.

Willan and Bateman have mentioned concomitant inflammations of the conjunctiva and mucous membrane of the pharynx; but I am led to believe that the greater number of the ecthymas of this description of which they speak, were due to a syphilitic cause (Vide syphilitic *phlyzacia*).

Ecthyma occasionally occurs during the exacerbations of lichen prurigo, scabies, and several other chronic inflammations of the skin; and the disease is a very frequent attendant upon convalescence from small-pox.

The continuance of chronic ecthyma, dependent on the number of successive eruptions that take place, and the state of the constitution, occasionally extends to a period of three or four months. The concomitant affections, if any exist, may get well before the pustules or continue after their disappearance.

563. *Causes*.—Ecthyma attacks individuals of every age and of every variety of constitution; (a) it occurs at all seasons, but is met with more particularly during spring. A cold and damp habitation, filthy clothing, and indifferent food are causes common to this and a great number of other affections of the skin. Ecthyma is not a contagious disease, and its appearance may correspond with a disordered condition of the functions of the stomach and bowels.

564. *Diagnosis*.—Whether ecthyma be acute or chronic, and consist in one or several successive eruptions, its voluminous and prominent pustules present characters which at all times prevent their being confounded with the other diseases of the skin. Mistake is impossible when its large pustules are compared with those of impetigo, of rosacea and of favus. When the pustules of acne and of sycosis present a large, hard, and red base, they might more readily be taken for pustules of ecthyma; but the pustules of the two former are evolved on indurated rather than on inflamed bases, and their modes of development and termination are very different from those of ecthyma.

The pustules of ecthyma are neither umbilicated nor contagious, like those of variola and vaccinia.

Ecthyma occurring in unhealthy subjects, might be readily confounded with a certain variety of pustular syphilis (ecthyma *syphiliticum*). This uncertainty, however, can only occur in those cases in which the eruption of the pustules of ecthyma has taken place in a slow and successive manner (*chronic ecthyma*). Further, *syphilitic phlyzacia* are seldom surrounded by an areola so broad as the pustules of ecthyma; the colour in each class of pustules is also different, being of a purplish or livid red in ecthyma, and commonly coppery in the syphilitic affection. The scabs of syphilitic phlyzacia are usually of considerable thickness, frequently nearly black and almost uniformly circularly furrowed. The ulcers that succeed them are deep and excavated, and are constantly followed by depressed and indelible cicatrices. Lastly, it is very seldom that syphilitic pustules are not accompanied by other venereal symptoms calculated to throw light on their true character; without these, indeed, the real nature of many phlyzacious eruptions would frequently remain obscure, especially when they are developed among the cachectic and ruined in constitution.

The small pointed pustules of scabies have no analogy with the

(a) The majority of cases of ecthyma occur in young men, who, with constitutions originally not of the strongest class, had imprudently indulged in excesses and irregularities to a very great extent, accompanied by privation of rest and other depressing circumstances. Very frequently in such cases it is mistaken for a venereal eruption, and the patient himself is readily made to believe in an opinion which his habits have made so probable. If mercury be had recourse to, under these circumstances, the disease is much aggravated, the dried scabs of which it is constituted grow on the part rapidly, becoming of a dark-brown colour, exceedingly hard and of a conical form, representing in fact, on a minute scale, the characters of the disease termed Rupia. Plumbe (*op. cit.*, p. 303).

large pustules of ecthyma; when these two eruptions occur accidentally in the same individual, it is always easy to detect the complication.

565. *Prognosis*.—The prognosis in ecthyma varies according to the number of eruptions, the state of the constitution, the nature and gravity of the concomitant lesions, the age of the patient, the evident possibility or impossibility of removing from beyond the influence of the causes that appear to have produced the disease, &c. *Acute* ecthyma always gets well in the course of two or three weeks; *chronic* ecthyma may continue for many months.

566. *Treatment*.—If the eruption in acute ecthyma is confined to a few scattered pustules, and exists without complication in an individual otherwise well constituted, diluents must be prescribed, the use of the simple cold or temperate bath enjoined, whilst a regular and unstimulating plan of life is pursued. If the eruption proves more copious, and is attended with much pain, if it appears complicated with furuncles, and the individual affected is young and vigorous, a general bleeding should be practised, and the cool and temperate bath repeated more frequently.

The health of those who are labouring under chronic ecthyma having frequently suffered from various other inflammatory affections of long standing, these are the serious diseases, the grave disorders of the constitution which it is of the last consequence to watch and attempt to subdue. A light, nutritious and restorative regimen, suited to the state of the digestive organs and of the constitution; aromatic or sulphureous baths prolonged in various degrees, and repeated two or three times a week, or alternated with baths of some saline mineral water, added to tonic and chalybeate medicines internally, must form the elements of the curative plan in such complicated cases.

When chronic ecthyma appears in an infant at the breast, it is of the highest importance to ascertain the qualities of the milk it is receiving; a change of the nurse may become essential to ensure the success of the general therapeutic means employed; this measure alone, indeed, frequently suffices to give a favourable modification to the constitution, and, as a consequence of this, to cure the complaint.

The ulcers which chronic ecthyma occasions when it attacks the lower extremities of elderly persons, have generally an unhealthy appearance, and are very slow in getting well. It is often found necessary to stimulate these by touching them with the nitrate of silver, or by bathing them repeatedly with some aromatic decoction, by using a solution of the chloride of lime as a wash, or powdering them with cream of tartar. (a)

#### *Historical Notices and particular Cases.*

567. The word *ecthyma*, employed by Hippocrates,<sup>1</sup> in a sense which the translators have interpreted by the Latin *pustula*, is applied in many passages to eruptions, the description of which is so incomplete that by some they have been held to be small-pox, by others a species of typhoid exanthema.<sup>2</sup>

Willan was the first modern writer who gave the title of ecthyma to the disease that has just been described, the characters of which he has portrayed with great distinctness. But few cases of the disease are to be found in our periodical publications. Several incomplete accounts of *eruptions of a great number of small furuncles*; of *pustular and crusted tetter* (dartres); of *a singular disease of the skin*, &c., give mere occasional glimpses of one or two of the characters of ecthyma.

(a) Deprived of the use of mercury in ecthyma, for reasons assigned in the text, we can, in requital, have recourse to an alterative scarcely less diffusive and searching in its operation, and yet safe in its general and ultimate effects. Iodine is the article to which I refer. Its salt the iodide of potassium, and in the more decidedly cachectic or chronic forms of the disease, the iodide of iron will meet the desired indications. As a topical remedy the ointment or the liniment of the iodide of potassium, will come in aid of the substances mentioned in the text.

<sup>1</sup> Hippocrates. Epidem., lib. iii.

<sup>2</sup> Forstus. De febri pestilente in qua ecthymata et exanthemata apparebant, lib. vi. p. 240.



I subjoin a few particular cases of the disease, and several others may be found in the dissertation of M. Asselin.<sup>1</sup>

CASE LXXXIX.—*Acute ecthyma of the scalp.* A young woman, after feeling the hairy scalp excessively itchy for some days in the beginning of August, 1820, was attacked in this part with *ecthyma*. Large *phlyzacia*, containing a purulent fluid, were evolved over the entire surface, and especially on the frontal and occipital regions of the scalp. This inflammation was attended with painful swelling of the lymphatics of the neck. The pustules were not visible except when the hair was parted. After continuing for seven or eight days, they all became covered with crusts, which, on falling off, discovered brown and violet-coloured marks on the surface of the skin. The integuments in every other situation were perfectly healthy (*Venes. ad 3viii; infusion of endive for drink*); after the lapse of a week *cight leeches* were applied around the back part of the neck, and three doses of purgative medicine were subsequently prescribed at intervals of four days; at the end of a month no traces of the disease remained, except a number of violet-coloured marks in the situations which had been occupied by the pustules.

CASE XC.—*Successive eruption of large ecthymatous pustules on the left lower extremity; pulmonary catarrh.* Antoine, forty-two years of age, consulted me on the 1st of March, 1826, on account of some large pustules with inflamed bases, which had appeared three weeks before on his left thigh.

On the 10th, the following circumstances were observed: 1. A very large pustule near the inner condyle of the femur, covered on its summit with a small black point. This pustule, with its areola, is nearly three-quarters of an inch in diameter. 2. Another still larger pustule, on the fore part of the thigh, the suppurating surface of which is from three to four lines across, whilst its base, formed by a broad areola, is hard, tumid and deep. These pustules are the seat of severe lancinating pains. On the fore part of the thigh there exist a dozen spots or marks, of a reddish-brown colour and circular shape, which have been produced, according to the patient's account, by the pustules that first made their appearance.

The patient complained of nothing save of a slight pulmonary catarrh, which had not prevented him from following his business of a hat-maker; (*mucilaginous drink; the warm bath; magnes. sulph. 3ss.*) This prescription was repeated three times in the course of six days. The tops of the pustules became covered with yellowish-brown scabs. The warm bath and mucilaginous drink were continued for a week. The crusts were detached without the expulsion of any sloughy core, and left two small cicatrices on the skin surrounded by a dusky violet-coloured areola. No fresh pustules were thrown out.

CASE XCI.—*Ecthyma; successive eruption of phlyzacious pustules on the left forearm and nucha; cæco-colitis.* On the 20th of March, 1822, I had a little girl, eleven years of age, brought to me, on account of a number of pustules which had made their appearance on the left forearm. They were in different stages; three were nascent, and consisted in mere red and papular-looking elevations, surrounded with broad areolæ; five were in the state of true phlyzacious prominent pustules, and about three-quarters of an inch in diameter, including the areolæ. Their bases were hard and deep, their summits filled with a purulent sanies. One was excoriated, from having been torn by the patient with her nails. Three others of the same size, surrounded with dusky areolæ, were covered with prominent scabs of a greenish-brown colour, and very adherent to the skin. These pustules were affected with shooting pains of considerable severity. Three violet-coloured marks were also visible on the skin, less depressed than those of small-pox, but about the same size. This eruption was unaccompanied with fever; the tongue was clean, the appetite good; yet the abdomen was distended and tympanitic; and for the last eight or ten days, four or five liquid dejections had been passed every four and twenty hours. Slight pressure in the course of the colon evidently occasioned pain (*six leeches to the verge of the anus; mucilage; tepid bath of an emollient decoction; diet; beef-tea with bread*). The intestinal symptoms yielded to this treatment in little more than a week. The nascent pustules

advanced; the scabs of the others were detached. A fortnight after her first visit, a fresh crop of five or six pustules made its appearance, one of which acquired such dimensions, that at first sight it might have been mistaken for a boil. The treatment was continued, and these pustules declined like those that had gone before them. The disease seemed ended, when a third eruption made its appearance on the nape of the neck, and in the course of the next fortnight many phlyzacious pustules were successively evolved on the occipital region of the scalp. Some of the lymphatic glands of the neck inflamed; the affected parts were painful, and the sleep of the patient became disturbed (*tepid mucilaginous baths every other day; cataplasms of mallows to the nucha*). Three weeks of this system sufficed to put an end to these symptoms; the pustules disappeared, leaving small violet coloured spots behind them, and the little patient got quite well.

CASE XCII.—*Ecthyma cachecticum; phlyzacious pustules successively developed on the forehead, trunk and extremities; tympanitis.*<sup>2</sup> "J. H., aged twenty-three years, a sailor, was admitted into the Pennsylvania Hospital on the 7th of May, 1825. He stated, that, in the month of February, while in Havana, without his having experienced any constitutional indisposition, he was suddenly affected with an eruption on his forehead. It commenced in the form of small pustules, the summits being of a whitish colour, the bases red and inflamed. The disease successively extended to other parts of his body, affecting the trunk and the extremities; his hands, feet, and the flexures of the joints, however, remained perfectly healthy. At the period of making the record, it is stated, that in some instances, the pustules had been converted into dark brown scabs, of various extent, from one-eighth to half an inch in diameter. This was particularly observable on the forearms. On the breast, the pustules presented the character of concreted pus, and had not assumed the brown colour. On his forearms, the skin surrounding the eruption was generally inflamed, and of a dark cochineal red. On the breast, the hue was more various, affording all the shades from the light lake to the dark cochineal red. On this part of his body there was noticed a discoloration of the skin, resembling the pityria of Willan; and spots of a colour between the ash and pearl-gray, were perceived more especially upon the trunk, which were supposed to be cicatrices, the seats of former scabs that had desquamated. At the period of his admission, his ankles were swelled, and we observed tumefaction and tenderness of the gums, from which there occasionally issued a little blood. His muscular strength was impaired; his appetite was good, and his alvine discharges regular; his skin was warmer than natural, and dry; his pulse 100, small, and wiry. He was put on the free use of fruit, and fresh lemon-juice, and his body was regularly washed with warm water and bran.

"From this treatment, on the 25th of May, there was an apparent improvement in his general health; his skin had become soft and of natural temperature; his pulse 100, and no longer wiry. He had, however, suffered more hemorrhage from his gums, which had been restrained by a gargle of myrrh. Many of the scabs had fallen off, leaving slight depressions, at first, of a faint red colour, and which afterwards became of an ash or pearly-gray, as expressed in the first report. He was now directed to take a fluid drachm of the tincture of sulphuric acid, with a pint of an infusion prepared with quassia, serpentaria and orange-peel.

"On the 1st of June, the eruption had nearly disappeared from the forehead. On the trunk, and the extremities, more of the scabs had fallen off, and the colour of the skin had considerably faded.

"On the 8th of June, though the eruption was evidently disappearing rapidly, it was deemed necessary to vary the prescription, in consequence of the man's having become tympanitic. His abdomen was tumid and elastic, and afforded no fluctuation on percussion. He stated that the distension was most obvious in the morning; that he was much troubled with flatulence, and that he experienced great relief, accompanied by an evident diminution of the swelling, on the discharge of wind. His urine was natural, both in colour and quantity; his bowels open; his tongue clean; his pulse 100, and feeble. He was now directed to take the carbonate of iron and the resin of guai-

<sup>1</sup> Asselin. *Essai sur l'ecthyma*, 4to. Paris, 1827.

<sup>2</sup> Thos. T. Hewson, M. D. *Case of ecthyma cachecticum*. (North Amer. Med. and Surg. Journ., Jan., 1826.)



cum; of each ten grains, with five grains of powdered capsicum, three times a day, instead of the acidulated bitter infusion. The ablutions with warm water and bran were continued. These means operated beneficially; the tympanitic affection subsided; the scabs continued to fall off; and a considerable portion of the skin had resumed a healthy colour. On the 15th, however, in consequence of his bowels being very frequently disturbed, it was deemed advisable to substitute ten grains of powdered gentian, in the place of the resin of guaiacum. In this form the medicine was continued until the 22d, when he requested permission to leave the hospital; at which period he was reported to be nearly well."

"The case I have recorded, will be readily recognized as the *ecthyma cachecticum* of these writers. In some features, shades of difference will be perceived, perhaps not essential, but only indicating an individual variety, and, probably, dependent on the same disordered state of the system. The *pityriasis* which I have noticed, has been frequently observed, in connection with slight disturbance of the constitution; and is by no means incompatible with that condition which is found to precede and to accompany the eruption of *ecthyma*. The spots, of a pearl or ash-gray colour, which appeared on the desquamation of the scabs, have not been described by those who have written on the pustular diseases of the skin; nor do I recollect to have observed such before. They may, therefore, be deemed purely accidental, or as marking some peculiar condition of the skin in the individual whose case has been noticed. Slight febrile symptoms are generally observed to usher in the first appearance of the eruption, and some degree of hectic or erethism accompanies the progress of the disease. Languor, depression of spirits, and prostration of the muscular powers, are ranked among the accompanying symptoms. Weakness of the digestive organs is likewise a usual attendant. In this man, the appetite is stated to have been good; yet the tympanitic affection of the bowels affords sufficient evidence, that the function of these organs was imperfectly performed. The swelling of his ankles, and the hemorrhage from his gums, exhibit proof of a depraved condition, approaching to scurvy. The duration of the disease corresponded with general observation, two and four months frequently elapsing before the cure can be effected.

"The previous history, or a knowledge of the causes leading to the production of the disease, cannot be collected from the present case. Very particular inquiries were made; but with all their general reputation for frankness and candour, we often find sailors little entitled to confidence, in the narrative they give of their real habits, or of the places they have frequented. This defect of evidence excited in some who witnessed the case, strong suspicions of its connection with a syphilitic taint. Against this error, it is of importance to guard; for too many persons affected with such eruptions, have been subjected to repeated and unavailing courses of mercury. That syphilis, in its secondary forms, ever assumes the character of *ecthyma*, has been denied by some very intelligent practitioners; and it will be readily conceded by every man of experience, that the diagnostic signs of the syphilitic forms are extremely equivocal, and that, in most instances, *ecthyma* can be traced to causes totally independent of such contamination. Though frequently observed in persons whose constitutions have been impaired by the previous ravages of the disease, or by the debilitating processes employed for its removal, it yet remains to be proved that the appearance of *ecthyma* can be essentially traced to a syphilitic origin. Should the alliance be established, we may hope, from the prevailing spirit of investigation, and from the minute attention paid to pathological distinctions, that the discriminating characters will not remain veiled in obscurity. From a careful perusal of the best writers, and from attentive observation in the treatment of *ecthyma*, I am inclined to believe, that in most instances, the cure will be most speedily accomplished without the use of mercury, though this mineral constitutes one of the most efficient remedies in certain defecations of the skin. Where there exists a discrepancy of opinion among those whose experience is entitled to respect, it is incumbent on us to examine scrupulously, and to weigh all the circumstances, in order to attain an accurate knowledge of the curative indications to be fulfilled.

"Under the impression, that the production of *ecthyma* is connected with a state of cachexia, our efforts will be directed to the

removal of this condition, and to the imparting of a due degree of tone and vigour to the system. To this end, on many occasions, a regulated diet, consisting of such articles as afford a nutriment bland and easy of digestion, will prove sufficient. At the same time, attention should be paid to personal cleanliness, in the use of the tepid bath; or this purpose may be conveniently accomplished by frequent ablutions with warm water and bran. With the same intention, we find various farinaceous decoctions, and water impregnated with vegetable mucilage, as obtained by boiling the bark of the slippery-elm, highly recommended. These topical means facilitate the desquamation of the scabs, and by softening and cleaning the cuticle, assist in restoring the skin to a sound and healthy condition.

"When the strength has been more deeply impaired, benefit will be derived from the administration of the vegetable tonics; as, the decoction of cinchona, serpentaria, sarsaparilla, &c., either simple, or in the more compounded preparations. To these, the mineral acids are often advantageously added. I have lately visited a patient, affected with the disease, after a severe attack of typhus. The man's face was greatly disfigured, and he was rendered a most loathsome and disgusting object. In this case, yeast, exhibited to the extent of a pint and a half daily, has afforded the most positive relief, acting as a grateful cordial; while the mildest officinal bitters, and the conserve of roses, excited intolerable distress, in consequence of the extreme tenderness of his mouth and throat.

"In persons labouring under constitutional irritation, the decoction of sarsaparilla, in combination with antimonials, has proved eminently serviceable. But on many occasions, our chief reliance must be placed in the free exhibition of opium, cicuta, stramonium, or other narcotics.

"In the more protracted forms of *ecthyma*, change of air and gentle exercise will contribute essentially in strengthening the system, and in shortening the disease." (a)

(a) In place of an abridgment of this case, I have inserted the original paper by Dr. Hewson, with the omission of a few remarks on the terminology of the disease.

The following case is given by Dr. A. T. Thomson, in his edition of Bateman's Synopsis:—"The patient, an unfortunate German gentleman, having fallen ill of a fever, lost all his employment, and became so depressed both in mind and body, that he sunk into a cachectic state of habit, and was soon attacked with *ecthyma*. He applied to me on the 27th of June, 1828, two months after the disease had made its appearance. The eruption covered the whole of the body, with the exception of the hands and the face. The stinging sensation was also accompanied with itching, or rather a tingling, which induced an involuntary desire to scratch, by which not only the heads of the pustules were rubbed off, but large portions of skin, in some places two inches in length, and nearly an inch in breadth, were torn off by the action of the nails during the sleep. Those pustules which had run their course had left dark stains behind, so that the greater part of the entire skin was covered with these and the crusted pustules. When the pustules were early rubbed, black dots of effused blood remained. The thighs were covered with ulcers. The body was greatly emaciated; there was a regular evening exacerbation of fever; the tongue was clean, but red and glazed; the skin felt dry and harsh; and the patient stated that the delirium attending the fever and the depression of mind had driven him nearly to commit suicide. The bowels were irregular. The following medicines were ordered:

R. Pulv. Jacobi veri gr. iij;  
 Extracti stramonii gr. ʒj;  
 — Hyosciami gr. iij: fiat pilulæ ij.  
 Horâ somni omni nocte sumendæ.  
 R. Magnesiæ sulphatis ʒj;  
 Magnesiæ carbonatis ʒj. M.  
 Pulvis omni mane sumendus.  
 R. Acidi sulphurici diluti fʒxij;  
 Tincturæ opii fʒiv. M.  
 Sumanter mxx ex cyatho decocti corticis cinchonæ cordifoliæ  
 ter quotidie.



## PUSTULES PRODUCED ARTIFICIALLY.

568. Different substances, when inoculated or applied to the surface of the skin, may cause the development of pustules of various forms and dimensions. Several of the eruptions thus artificially excited, have been made the subjects of particular study by more than one pathologist.

569. *Pustules from the inoculation of animal matters.* The title of *spurious variola* or *false small-pox* used formerly to be applied to those pustules which followed the inoculation of variolous matter which had become altered or deteriorated by drying, keeping, &c., which in a word, had lost its contagious and specific properties. Pustules of a like description, engendered by the inoculation of the vaccine virus which had lost its peculiar properties, have since been entitled *spurious cow-pox*. The pustules thus excited have, however, no analogy with the pustules of small-pox or of cow-pox; on the contrary they bear a great resemblance to the pustules that follow wounds with a rusty instrument, impregnated with some irritating animal matter. These pustules usually get well spontaneously in the course of a week or two. They occasionally end in ulceration when they have been irritated by the neglect of proper cleanliness or the application of stimulating local applications. By touching their apices with nitrate of silver, the inflammation of their bases is lessened, and their cure is expedited.

570. *Pustules from the external application of certain vegetable substances.* Several vegetable substances, externally applied, have the property of exciting accidental pustules which either appear alone or complicated with vesications and papulæ. A patient of mine, affected with dropsy, for whom I had prescribed the inunction of half a drachm of the extract of aconite incorporated with half an ounce of lard, was attacked soon after commencing the use of this application with an

"When the irritation is severe, let the surface be sponged with hot water. Let the diet be milk, fresh-boiled vegetables, and a moderate share of mutton under-cooked.

"July 5th.—Few fresh pustules have appeared; and the dark colour of the blotches is much less. The new pustules contain a mild pus. The bowels are regulated by the aperient; and although the fever still returns every evening, yet the delirium which attended it has disappeared. He feels, occasionally, as if a cloud had settled upon him, and cut him off from all external impressions. The tingling and irritation are less, and return only in paroxysms, during which he still tears off large portions of the skin.

Cont. medicamenta.

R. Plumbi acetatis ʒss;  
Acidi hydrocyanici fʒiij;  
Ung. cetacei ʒiij. M.

Fiat unguentum partibus cutis nudatis applicandum.

"18th July. He is much better in every respect, and the irritation is so much abated, that he can now sleep without excoriating his body. He is gaining both in flesh and strength.

Perstet in usu medicamentorum.

"August 2d.—The eruption is nearly gone, and the skin is regaining its natural aspect. He complains of watchfulness, and great depression; but the want of employment and distress of mind seem to be counteracting the full powers of the medicines.

Cont. medicamenta.

R. Camphoræ gr. v;  
Pulveris Jacobi gr. iij;  
Extracti hyoscyami gr. iij.

Fiant pilulæ ij, h. s. sumendæ.

"From this time the disease rapidly abated, and having discontinued his applications to me, he became fat, got into health, and is now in Germany.

"The chief feature in the treatment of this case is the combination of the tincture of opium with the diluted acid, and the external application of the hydrocyanic acid, in the form of ointment. The opium thus combined seemed to allay the irritation, and certainly augmented the tonic power of the bark; whilst the ointment deadened the insupportable itching which had caused the tearing of the skin."

eruption of prominent pustules, full of an opaque yellowish fluid, and surrounded by an areola of the most vivid red. These were associated with solid papular elevations, slightly prominent and containing no fluid, between which the skin preserved its natural tint and appearance.

Accidental pustules of this kind may become excoriated. Vial mentions the case of a man who had his face made raw from having rubbed it with the juice of the *euphorbia cyparissias*.

571. *Pustules from the application of certain inorganic substances.* The most remarkable of these pustules are such as follow the application of the tartrate of antimony to the skin, either alone, or mixed with hog's lard. In so far as form and size are concerned the pustules produced by this means have some resemblance to those of variola and ecthyma.<sup>1</sup> Artificial eruptions of this kind are usefully excited in a great number of different diseases; of course it does not enter into the plan of this work to consider these under a therapeutical point of view; I only take the opportunity of stating that whooping-cough and chronic inflammation of the larynx are those complaints in which they have always appeared to me to be attended with the best effects.

These pustules, at their height, are flattened, and of the size of lentils. They contain a pseudo-membranous deposit and some purulent serum. They almost invariably present a small brown point in their centre. Their base is surrounded by an areolar blush two or three lines in diameter, which is lost insensibly in the natural hue of the skin, or blends with the areola of the neighbouring pustules when they are very close to each other.

On the few next days after their appearance they continue to enlarge; the fluid they contain becomes thicker and whiter; their central brown spots grow larger and acquire a darker hue. If the cuticle be removed with a view of examining the interior of these pustules, a sub-epidermic pseudo-membrane is found, deposited on the surface of the papillæ of the corion, which appear elongated, injected and often infiltrated with blood. The central crusts become larger and larger, the areolæ diminish, and the desiccation is completed before any long period elapses. On the following days the crusts are thrown off, leaving small violet-coloured marks and indelible cicatrices of a circular shape upon the skin.

The pustules are occasionally intermingled with others of smaller dimensions, of a semi-globular form and not depressed in the centre.

The pustules produced by the application of tartrate of antimony are formed with greater or less rapidity, according to the irritability of the skin and the quantity of the salt employed. They are larger and more painful when they follow the application of the pure tartar emetic to the skin by means of a Burgundy pitch plaster, than when it is incorporated with lard or spermaceti ointment. In elderly and weakly persons the pustules have usually a violet or livid tint; they are then ecchymosed, and contain a quantity of sanguinolent fluid; under these circumstances they bear a great resemblance to the pustules of ecthyma *cachecticum* and the bullæ of rupia. A woman thirty years of age entered the hôpital St. Antoine on account of a chronic peritonitis and an ulcerated state of the bowels, accompanied with profuse diarrhœa. I directed the surface of the abdomen to be rubbed with the ointment of the tartrate of antimony, which caused the eruption of a crop of large, violet-coloured, sanguinolent pustules, some of which were as broad as the bullæ of rupia. The fluid they contained dried up into black and very adherent incrustations. This woman having died, I had an opportunity of examining the state of the skin upon which they were developed. I found it softened and perforated towards the centre of the different scabs.

I have oftener than once remarked pustular eruptions upon the genital organs of those patients who had been directed to rub the chest or abdomen with an ointment of the tartrate of antimony. Such eruptions have always appeared to me to be owing to a small quantity of the unguent having been inadvertently carried to these parts, the integuments of which being soft and moist, and abundantly supplied with follicles, may be supposed peculiarly susceptible of the action of this stimulant. These adventitious eruptions, however, have been

<sup>1</sup> Jenner. On the influence of artificial eruptions in certain diseases, 4to. Lond. 1807. Lombard. Note sur l'éruption du tartre stibié à l'extérieure. (Gaz. Médic., 1833, p. 246.)



attributed by some observers to a secondary effect of the tartrate of antimony absorbed into the system.<sup>1</sup>

572. *Pustular eruptions produced by arsenic.* Girdlestone informs us that he has seen eruptions of the skin succeed the use of arsenical preparations. The following is a new instance of this kind. Joseph Hubert, two days after having pounded a large quantity of arsenious acid, was attacked with an eruption which was already of eight days standing when he entered the hôpital de la Charité. The whole of the face was covered with crusts of a yellowish-green, some of them isolated, others confluent, under which the skin looked red. In the spaces between the crusts, small psudracious pustules were perceived here and there, analogous to those of impetigo; the eyes were watery and slightly inflamed; the features were still swelled, but less so than they had been on the second day of the eruption. Some small clusters of pustules and similar crusts were disseminated over the hands, arms, scrotum and root of the penis. None were discovered on the hairy scalp or trunk. The patient had no fever; the tongue was white, the abdomen not particularly sensible. He was bled from the arm, and the use of whey and of a bland diet speedily restored him to health.

#### IV.—FURUNCULI; FURUNCULAR INFLAMMATIONS.

Vocab. *Furunculi.*

573. The cells of the corion are penetrated at all points by small conical prolongations, derived from the subcutaneous cellular membrane. These everywhere accompany the vessels and nerves which proceed from the inner aspect of the skin towards its superficies, there to form the papillæ and vascular rete. Inflammation of one of these prolongations gives rise to the diseases entitled hordeolum or sty, and furunculus or boil; the simultaneous and confluent inflammation of several of these appendices constitutes anthrax or carbuncle.

574. The proper cutaneous tissue constantly participating to a greater or less amount in the inflammation of these processes of the cellular substance, I have felt called upon to devote a particular chapter to the consideration of the furuncular inflammations. They are three in number: sty, boil, and carbuncle, and approximate so closely in their causes, seat, progress, and termination, that they may be regarded as mere varieties of one and the same form of inflammation. Left to themselves, these affections always terminate in the mortification and subsequent expulsion of one or more of the small cellular cones of the dermal tissue, which are then designated by the title of *cores*. This peculiar termination of furuncular inflammation is generally ascribed to the resistance offered by the fibrous corion to the expansion of the cone of inflamed cellular membrane, which consequently undergoes a kind of strangulation, and perishes.

575. The occurrence of furuncular inflammation is frequently connected with the existence of a disordered condition of the stomach and bowels; this form of disease is scarcely ever the effect of mere irritation applied immediately to the skin.<sup>2</sup>

576. The three affections composing this group are distinct from the other phlegmasiæ of the skin in their seat, which is in the cellular substance of the reticulated texture of the corion. They differ from the gangrenous inflammations properly so called, inasmuch as they do not appear under the influence of any *specific* cause, and in the circumstance of the sloughing that does occur, being attributable, in great measure, to the anatomical structure of the parts affected. Furuncular inflammations consequently present a particular curative indication, namely: to relieve the strangulation of the cellular appendices that penetrate the reticular texture of the corion.

577. Hordeolum and furuncle are two diseases of such common occurrence, so universally known, and generally so unimportant, that I

have deemed it needless to give the details of any particular case of either of them.

FURUNCULUS. BOIL.

Vocab. *Boil, Furuncle.*

578. Furuncle is an inflammatory swelling of the skin and cellular substance, of no great size, circumscribed, conical and prominent, hard, very red, hot and painful, and terminating in the formation of a very small quantity of matter and the expulsion of a mass of mortified cellular membrane, known under the name of a *core*.

Furuncles are observed to occur most frequently on the buttocks, thighs, arm-pits, the back, nape of the neck, and anterior parts of the abdomen.

579. *Symptoms.*—The disease begins by a small hard and conical tumour of a vivid, or violet-red colour, which, although probably not larger than a pea when first discovered, may, within a few days, attain the size of a large walnut. The pain which accompanies the development of a boil, has been compared with some justice, to that which would follow the passage of a drill or gimblet through the skin. From the fourth to the eighth day, the boil rises in a point; its apex becomes white, then softens, and finally gives way, when a small quantity of sanguinolent pus escapes, and the top of the sloughy substance is exposed. This opening in the skin is commonly as minute as if it had been made with a fine probe; even in furuncles of the largest size it scarcely exceeds a line in diameter, although the slough beneath is frequently several lines in breadth and thickness. This slough or core, formed of a small piece of the cellular membrane infiltrated with pus, is thrown out between the tenth and twelfth day. After its expulsion, whether this have been spontaneous, or accomplished by means of pressure, the tumour seems pierced from its apex to its base, by an open-mouthed cylindrical cavity. The pain now ceases, the swelling disappears, the skin collapses, the cavity left by the core fills up, and after the cure, which is accomplished between the twelfth and fifteenth day, no trace of the disease is left, save a small depressed cicatrice of an irregular round shape and a dusky red colour.

Between the common furuncle, the summit of which exhibits one small opening only, and well-marked and sloughing anthrax, there is a disease of an intermediate description, in which the apex of the tumour is pierced with a number of small orifices that ultimately unite and compose a single opening of an irregular circular shape and considerable magnitude. This affection has by several pathologists been denominated furunculus *anthracoides*.

The development of one furuncle is frequently followed by the appearance of several others, each of which pursues its course uninfluenced by those in its vicinity. The size of these is various; one in particular is usually much larger than any of the others.

580. Furuncles are not commonly attended with fever, unless the individual boils be extremely large, or their number very great. When they appear on the perineum, between the anus and scrotum, the urine is generally passed with pain and difficulty. When they occur on the nucha, shoulders, or buttocks, they frequently occasion acute inflammation of the lymphatic vessels and glands of the neck, axillæ, and groins.

581. *Causes.*—Frictions performed with irritating ointments, want or due attention to cleanliness, the use of sulphureous, mercurial, alkaline, and other baths; several inflammatory affections of the skin, such as small-pox, and ecthyma; the application of blisters, and the deeper inflammation produced by a seton, &c., may occasionally be observed causing the production of boils. They seem also at times to appear simultaneously with slight chronic inflammatory affections of the digestive organs; but they also very frequently occur without any appreciable cause, and particularly at the termination of other diseases.

582. *Diagnosis.*—Furuncle does not differ from Hordeolum save in the circumstances of size and situation; hordeolum being always of inconsiderable dimensions, and situated on the edge of the eyelid. The small boils of the penis and prepuce are exactly similar to sty in the circumstances of form and size. Anthrax in fact is itself no more

<sup>1</sup> Gazette Med., 1832, p. 842.

<sup>2</sup> Yet the application of blisters, &c., is frequently followed by the subsequent development of boils in the situations they occupied. Vide § 581.—R. W.



than an agglomeration of confluent furuncles: the inflammation has then attacked a surface of some extent, and a mass of the cellular prolongations have been at once stricken with sphacelus. The small abscesses occasionally observed in the skin after the absorption of purulent matter, differ from furuncles in their progress, their flattened form, and the absence of a sloughy core. (Case XCIII.)

583. *Prognosis*.—Furuncle is by no means a serious disease; it is one indeed which frequently appears to form a crisis in other acute and chronic affections. It occasionally happens, however, that among the aged, and individuals of a bad habit of body, repeated eruptions of boils are observed to take place whilst the constitution is gradually giving way.

584. *Treatment*.—It has been said that furuncles might be arrested in their progress by cauterizing them with the lapis infernalis. The operation is by no means very painful, but the truth is, it seldom proves effectual; and as patients generally prefer such palliative measures as bathing the part affected with tepid fomentations, and the application of emollients and narcotics, we are generally content with endeavouring to prevent any fresh eruptions, leaving such as already exist to pursue their course, for it very rarely happens that boils are of such a size or so severely inflamed as to require the local abstraction of blood, or the division of the skin. When one or more of these tumours prove very painful, however, the simple division of the integument is the most speedy and efficacious measure in bringing relief that can be adopted. A bread and milk or linseed-meal poultice is the best, as it is the topical application most frequently employed in the treatment of boils. When one crop of boils appears repeatedly after another, the morbid disposition which engenders them is frequently checked by the exhibition of an emetic, or a few doses of slightly purgative medicine for several days successively. Yet it sometimes happens that these means prove unavailing, and it is only after effecting a modification in the constitution by appropriate regimen, and perseverance in a course of medicine for several months, that we succeed in putting a stop to these eruptions.

Fosbroke recommended large doses of the diluted sulphuric acid, in a proper vehicle, as a very effectual means of subduing the pain of boils already existing, and of preventing the appearance of fresh eruptions. He carried the dose of this medicine the length of six drachms daily.

#### *Historical Notices and particular Cases.*

585. Celsus<sup>1</sup> has left us a very good account of furuncle. Bichat<sup>2</sup> made a particular study of its structure. Fosbroke<sup>3</sup> and M. Daynac<sup>4</sup> have severally published observations on the disease. M. Guersent,<sup>5</sup> under the name of *furuncle atonique*, appears to me to have described a variety of ecthyma.

The following case of a number of abscesses appearing in the substance of the skin in consequence of the absorption of purulent matter, seems well calculated to display the characters which distinguish this rare form of disease from furuncle.

CASE XCIII.—*Abscesses in different parts of the body and in the substance of the skin, appearing in the form of an eruption.* Morize, aged forty, entered La Charité on the 9th of November, 1832. All that could be learned from the patient amounted to this, that he had been ill for a few days only, and that he felt pain in the right arm and elbow. His expression of countenance was evidently altered, but nothing much amiss was discovered after a careful examination. The pulse was not rapid, and the state of the digestive organs and thoracic viscera seemed satisfactory. The patient consequently attracted little attention for several days—he was held to be affected with articular rheumatism of no great severity. Unexpectedly however, an abscess the size of a small walnut was discovered below the elbow joint. It was not very painful, and not being opened it shrank and disappeared spontaneously a few days afterwards. The pulse at this time was frequent, the tongue moist, the cast of countenance morbid. The

patient complained of general uneasiness and of wandering pains in the limbs. His state was now deemed alarming, although this did not appear to depend on any particular affection of the viscera contained in the great cavities. Four days before his death, Morize sank into a state of prostration; the pulse became small and rapid, the tongue hot, dry, &c.; at the same time a number of small spots resting on a hard basis appeared upon different parts of the surface. Two days before his death, an abscess was discovered in the region over each cheek bone, the skin of which had previously been red, swelled and inflamed. At the same time there appeared upon the neck and upper parts of the chest, a multitude of small tumours the size of a pea or a little larger; the bases of these were in general hard, their summits soft; but several of them were uniformly softened throughout. The patient got worse and worse, and at length died in a state of low delirium. On examining the body after death, the following appearances were discovered.

*Externally*.—An abscess over each cheek bone as large as a walnut, containing a quantity of reddish-gray pus. On the neck several tumours the size of a pigeon's egg. Nothing was discovered when the muscles were cut into. The thighs and legs were beset, in the same way as the parts already mentioned, with small cutaneous and larger subcutaneous abscesses. An incision carried through the muscles of the leg laid open an enormous abscess, which seemed to have destroyed the whole of the tibialis anticus, and denuded the bone in its vicinity. Another abscess of somewhat smaller size was discovered in the same situation in the left leg. Three others, the size of large walnuts, were detected in the substance of the gastrocnemii muscles.

*Articulations*.—Both of the shoulder, elbow, and wrist, hip, knee, and ankle joints, contained a considerable quantity of yellowish or rather greenish fluid, thicker than the proper synovia, and more like mucous than serum.

The brain was healthy. The left lung was covered with a thin layer of a recent pseudo-membranous deposit. The substance of the lung was loaded posteriorly; in other parts it was perfectly crepitating. In the lower part of the superior lobe of the right lung there was found an abscess as large as a hazel-nut. The heart was healthy, as were the large vessels of the thorax and abdomen. The abdominal viscera, except the spleen,<sup>6</sup> which was very soft, were natural.

586. There is the greatest analogy between this case and two others, which will be found embodied in the memoir of Dance on phlebitis.<sup>6</sup>

#### HORDEOLUM.

##### *Vocab. Hordeolum, Sty.*

587. Hordeolum or sty is a small furuncular tumour of the eyelids, observed most frequently near the free edge of the upper lid, and the greater angle of the eye.

588. *Symptoms*.—Sty may occur as an acute or as a chronic complaint. In the former case it appears in the shape of a tumour, the size of a barley-corn, oblong, rounded, prominent, of a deep-red colour, and tipped on its apex with a small yellow speck of suppuration. This small tumour, which is attended with acute pain and considerable swelling of the eyelids, bursts and discharges a little clear and serous pus. The opening of the skin soon closes, and a second white point makes its appearance upon the tumour, which ultimately giving way, permits a sloughy core to escape with the effect of immediately putting an end to the whole of the morbid symptoms.

The second variety of sty consists of a small hard, red, and indolent tumour, which, after having remained stationary for several weeks, is at length attacked with inflammation of a more active description, when it terminates in the same manner as the variety previously described.

589. Whatever the course of hordeolum, it still presents two very marked and apparent peculiarities. The tumour at one time projects more exteriorly than towards the eyeball, in which case it impedes the vision but little, and the skin is free to give way and suffer the

<sup>1</sup> Celsus. De re medica, p. 236, lib. v. sect. xxviii. Ed. Fournier et Ratier.

<sup>2</sup> Bichat. Anat. générale, t. iv. p. 687.

<sup>3</sup> Edinb. Med. and Surg. Journ., v. xviii. p. 64.

<sup>4</sup> Revue médicale, Septembre 1829, p. 416.

<sup>5</sup> Archives génér. de méd., t. i. p. 336.

<sup>6</sup> Arch. gén. de méd., t. xviii.



core to escape. At another time, however, the sty, projecting on the inner surface of the eyelid, irritates the ball of the eye by its constant friction upon the conjunctiva. In this case the mucous membrane of the eyelid becomes softened, and is finally perforated over the most prominent point of the tumour.

590. *Causes.*—The occurrence of hordeolum is frequently observed to coincide with a deranged condition of the digestive functions. This furuncular inflammation consequently is very commonly observed among individuals addicted to the pleasures of the table or to spirituous potations. The disease appears occasionally with something like the regularity of a periodical distemper. Females have also been known to be troubled with it for several months before the appearance of the catamenia, and to suffer repeatedly at each recurrence of this evacuation.

591. *Diagnosis and prognosis.*—Hordeolum differs from the rest of the furuncular inflammations in its seat, its small size, and the slightness of the general and local symptoms that attend it.

592. *Treatment.*—An attempt may be made to cut short the progress of sty by applying pounded ice to the eyelid from the moment the disease is discovered; few, however, will be found ready to submit to this application, which, moreover, has not been known to succeed completely in any one instance in which it has been used. When the sty is very much inflamed a small cataplasm of roasted apple or crumb of bread, applied between the folds of a fine muslin rag, relieves the pain, and seems to hasten the expulsion of the core, a consummation which, when it is long looked for in vain, is occasionally brought about by the aid of a slight degree of pressure to the base of the tumour. When hordeolum occurs in an individual of scrofulous constitution, Weller advises the application of cataplasms of hemlock and saponaria, with the addition of camphor, to prevent the occurrence of the small induration which is one of the frequent consequences of this complaint.

As in furuncle, relapses are frequent in hordeolum. The only mode of preventing these is to attack, by appropriate regimen and medicinal means, those constitutional causes which appear to have an influence on the development of the disease. (a)

#### *Historical Notices.*

593. Celsus<sup>1</sup> has pointed out hordeolum very distinctly. Scarpa<sup>2</sup> and Weller<sup>3</sup> have given good accounts of its characters and mode of treatment.

#### ANTHRAX.

*Vocab. Anthrax, Carbuncle.*

594. Anthrax is an acute inflammation simultaneously affecting several of the contiguous cellular cones that penetrate the reticulations of the true skin. It appears in the form of a circumscribed very hard and very painful tumour of a deep red colour, accompanied with a sensation of burning heat, and is invariably terminated by the mortification of a mass of the cellular substance and the destruction of the corresponding portion of integument.

595. *Symptoms.*—Anthrax is most commonly developed on the nape of the neck, the back and shoulders, the parietes of the abdomen and thorax, and on the buttocks and thighs. The disease often begins in the shape of a small tumour but a few lines in diameter, and

(a) When suppuration has taken place, the sty may be punctured with a lancet. Scarification with the shoulder of this instrument and rubbing the part with mercurial ointment, have, within my own experience, caused a resolution of the inflammation, and thus abbreviated the disease. In scrofulous subjects, touching the parts with lunar caustic will hasten the cure after suppuration, and act in a degree also as a preventive.

<sup>1</sup> De re med., lib. vii. cap. 7.

<sup>2</sup> Delle princ. Malattie degli occhi, 8vo. Ed. 5ta. Pav., 1816. Transl. by J. Briggs, 8vo. Lond., 1806.

<sup>3</sup> Weller. Krank. d. Mensch. Auges. 3te. Aufl., 8vo. Berl., 1826. Transl. by Monteath, 2 vols. 8vo. Glasg., 1821.

very similar to a common boil, save when its apex is covered, as occasionally happens, with a sanguinolent bleb. Anthrax, however, is sometimes seen, even from its very commencement, of much larger dimensions, in which case it advances with such rapidity, as in eight or ten days to have acquired a diameter of as many inches. In the same measure as anthrax spreads, it becomes more prominent and penetrates more deeply. It continues extremely hard through its whole extent up to the period at which the cellular tissue is attacked with mortification. After this, the circumference still remains very firm, and the base continues to spread, whilst an obscure fluctuation may be discovered in the centre of the tumour. The violet tint of the skin does not disappear with pressure; the heat, which is sharp and scalding at first, especially about the centre of the tumour, does not decline until after the formation of one or more openings; finally, the pain, alternately gravative and tensive, extends to the circumference of the indurated base.

When anthrax is left to itself the skin which covers the tumour acquires a violet or bluish tint, and after the lapse of some days, having become thin and softened, it gives way in several places, when a small quantity of bloody pus, mingled with shreds of mortified cellular membrane, is discharged. It may also be stricken with death over some considerable extent, and present the black colour and insensibility characteristic of sphacelus. On the succeeding days the inflamed skin is successively softened in various other points, and new perforations take place, from the bottoms of which whitish sloughs of cellular membrane may be extracted. The modified cellular substance never assumes the black colour of the gangrenous skin. The perforations enlarge, either from the destruction of the integuments in their circumference, or by becoming united together. They all continue to pour out a little thick pus which is rendered sanguinolent, apparently by the accidental rupture of some minute artery or vein. When the perforation in the integument is considerable, the sloughy cellular substance exhales a fetid odour, which however is very different from that usually disseminated by animal substances in a state of putrefaction. By slow degrees the sloughs are detached, the discharge becomes more abundant and less thick, and the pain, heat, and tension diminish. After the detachment of the mortified parts the superficial fasciæ are occasionally found perforated, denuded or eroded; the integuments in the circumference of the anthrax are loosened, thinner than natural, of a bluish colour, and in some places so much disorganized as to be incapable of reuniting with the subjacent tissues.

If the disease terminates favourably, a cicatrice is formed in part from the ulcerated surface, and in part by the reunion of the loose flaps of skin. This cicatrice is always irregular, puckered and depressed, and long retains a dusky-red or brownish hue. It is occasionally intersected with thick bands which occasion considerable deformity and render certain motions difficult.

596. Anthrax often makes its appearance without having been preceded by any evident disorder of the principal functions. Patients, however, do occasionally complain for a few days before its development of anorexia, lassitude, chills or shivering fits, and other symptoms usually observed on the invasion of acute diseases. When the tumour is voluminous it is very regularly attended with febrile symptoms of greater or less intensity; there are restlessness and want of sleep; the skin is dry, the urine high coloured and scanty, the belly is bound, and the head is heavy and painful.

597. These general symptoms attendant upon anthrax may be complicated with various others according to the regions of the body upon which the disease occurs:

1st. When it is developed on the lateral or fore parts of the neck patients complain of dyspnœa, cough, and sense of heat in the larynx and trachea; the face is also flushed, and there is headache of the most violent description.

2d. When the parietes of the thorax are the seat of the disease the inflammation may be repeated, as it is said, in the pleura or lungs, and occasion pulmonary symptoms of various degrees of severity.

3d. Lastly. Anthrax attacking the parietes of the abdomen is occasionally greatly increased in severity by the sudden occurrence of peritoneal inflammation.

598. Various forms of cutaneous inflammation may appear along with and complicate anthrax. Furuncle, of all these complications,



is undoubtedly the most common. Boils, indeed, very generally precede the attack of anthrax; they, however, even more constantly succeed the disease, appearing in crops around the circumference of the tumour.

599. *Causes*.—Children and the youthful are much more rarely affected with anthrax than adults and the aged. The disease is frequently seen attacking females about the critical period of their lives. It may arise from the application of acrid and irritating substances to the skin, the bites of insects, or filthiness. It occurs still more commonly as one of the sequelæ of measles, small-pox, and several other diseases of the skin. Like erysipelas, anthrax has also been seen as a consequence of the prolonged influence of certain causes which appear to act primarily on the digestive organs.

Anthrax is more frequent in the spring time and summer than in autumn and winter.

600. *Diagnosis*.—Anthrax is easily distinguished from the other furuncular diseases. Boils present but a single opening, and are smaller in size and more conical in shape than anthrax; they also commonly occur in succession, several following one after another. Anthrax, on the contrary, from the time it is perceived, presents a flatter, less pointed and broader tumour than furuncle, and at a later period is perforated with several openings on its surface. The differences that exist between these two diseases must not, however, be made greater than they actually are; anthrax being in fact no more than a tumour formed by the agglomeration or confluence of several furuncles, a fact which was first demonstrated by Baron Dupuytren, and made generally known by the publication of his lectures on clinical surgery.

At a time when pathological anatomy had not yet made us familiar with the structure and true nature of anthrax, the disease was often confounded with another affection, the anthracion or malignant pustule, which has frequently been described under the same name. The anthracion, however, belongs to another order of diseases, and I shall by and by have occasion to speak of its distinguishing characters.

601. *Prognosis*.—When anthrax is of moderate size and the individual attacked appears otherwise of a sound constitution, it is unattended with danger. But the disease may have the most unfavourable issue when it is of large dimensions and is situated on the parietes of the thorax or abdomen, the viscera or lining membrane of which may be attacked with fatal inflammation.

The prognosis generally is unfavourable in the aged, in whom a considerable extent of the skin is frequently observed to become gangrenous.

602. *Treatment*.—To whatever cause anthrax may be traced, it is necessary to attack the disease in the very beginning, by blood-letting, proportioned in amount to the age and habit of the individual, and to the intensity and extent of the inflammation. A number of leeches ought also to be applied around the circumference of the swelling, and the bleeding from the bites of these encouraged by some emollient tepid fomentation, or the application of cupping-glasses. These measures may require to be repeated oftener than once.

Compresses dipped in the *coldest water* applied to anthrax, and frequently renewed, will be found singularly efficacious in allaying the pain. This application is much better than any form of warm cataplasm or emollient fomentation, which rather increase or keep up than allay pain by augmenting the morbid heat of the skin.

After the due employment of blood-letting and cold applications, the best means of putting an end to the inflammation and relieving the tension of the skin, at our command, consists in making a simple crucial incision through the centre, completely across and to the bottom of the swelling. This will generally be found sufficient in the smaller-sized carbuncles; but those of larger dimensions may require a much greater number of incisions to set every part of the tumour free. These incisions give immediate relief from the strangulation under which the parts involved in the swelling suffer, and the blood that is lost lessens the inflammation and prevents the threatened gangrene of the skin and processes of cellular substance that penetrate it, from taking place. The incisions, further, facilitate the discharge of purulent matter, and the escape of the mortified masses of cellular membrane; they also give prompt relief to the local pain, as well as

to the general phenomena thereby induced; to conclude, they abbreviate most materially the natural duration of the disease.

In dressing the part subsequently, the flaps must be gently compressed every day, so as to squeeze out the matter that may be formed and the shreds of cellular substance that may have become loose; the immediate surface of the wound may be covered with a piece of soft lint or linen rag spread with some mild cerate, and the whole enveloped in an emollient cataplasm. When the ulcer tends to cicatrization it is occasionally found necessary to remove the loose flaps of integument which have suffered too much to be brought to re-unite with the subjacent cellular membrane; attention must also be paid to keep the cicatrice as smooth and regular as possible.

603. At the commencement and during the progress of anthrax patients ought to be restricted to the regimen observed in acute diseases. When the tongue is yellow or white, and a bitter taste is complained of in the mouth, with but little thirst, many have advised the exhibition of a purgative or an emetic. I have not myself had recourse to either of these remedies in any case of anthrax I have encountered. I have always seen the functional disorders of the digestive organs, on account of which they have been recommended, disappear of themselves in the same ratio as the inflammatory affection of the skin drew towards a close. And yet the unquestionable utility of these remedies in cases of furuncular eruption might induce us to give them a trial under certain circumstances.

It seems almost unnecessary to add that the diseases which may accidentally complicate anthrax, such as peritonitis, pleurisy, &c., themselves require peculiar treatment, which indeed must be so much the more active, as their association with an acute inflammation of the skin commonly renders their progress more rapid.

When the disease has come to an end, a few sulphureous baths are almost always of service, especially to the aged.(a)

(a) In some cases of anthrax, of considerable severity, too, I have found a simple incision made down to the healthy tissue at the base of the tumour, suffice. Dressing with ointment of chloride of lime is good. After an emetic or purging, quinine and nutritive stimulants are often indicated, and, in place of opium, hyoscyamus or conium and camphor are preferred, when the first mentioned remedy disagrees with the patient. The following is a judicious summary of the treatment of anthrax.

“Free and early incision is to be made, usually of the crucial form, throughout the whole extent of the diseased mass; this evacuates the purulent formation, affords an exit for the sloughs when loose, and limits infiltration. But this is not enough. Potassa fusa follows the bistoury, and is used freely; by it the dying parts are at once converted into a dead eschar, healthy separation is accelerated, and injury of the system from absorption of the deleterious products of humid putrescence is almost at once arrested; and, further to insure fulfilment of the last indication, the slough, as it loosens, is to be carefully removed by knife or scissors. The practice seems severe, but no other will prove in all respects successful; and the more advanced the case, the greater the necessity for its adoption. Less pain is occasioned than might be supposed, the greater part of the cauterized tissues being already in a gangrenous state. Poultice is applied till the slough is discharged; then water-dressing, early medicated to meet approaching debility.

“The constitutional treatment is never thoroughly antiphlogistic. At the commencement, evacuations are necessary; for the stomach and bowels an emetic and purgation; for the liver, mercury, cautiously administered; then occasional alteratives, as perhaps the hydrargyrum c. cretâ. Early tonics and stimuli are required—bark, wine, ammonia, brandy, turpentine enemata, according to the features and exigencies of the case. So long as the power of swallowing remains, the remedies are to be perseveringly administered; for, provided the suitable local treatment has been practised, patients often rally successfully, even though previously in *extremis*. Omit the use of the bistoury and potass—and all constitutional care, however skilful and unwearyed, will not arrest the tendency to collapse, or avert a fatal issue.

“These strong expressions, in favour of strong remedies, are of course applicable only to the more serious and urgent cases. There



*Historical Notices and particular Cases.*

604. The word ἀνθράξ in the Hippocratic writings does not appear to have a very determinate meaning, inasmuch as some commentators have held it applicable to *carbuncle* and others to *variola*.<sup>1</sup> The description of the ὑμή<sup>2</sup> of Celsus seems much more applicable to *furuncular anthrax* than that which he has given of the disease he entitles *carbunculus*.

Furuncular anthrax or carbuncle, the disease we are now discussing, and malignant pustules or anthracion, were long considered in France as varieties of the same disease. Baron Dupuytren was the first who drew the precise line of distinction between them, and who demonstrated the analogy of the variety of anthrax entitled *benign* to the common furuncle. This fact has been well authenticated by M. Cadet.<sup>3</sup> He gives three cases of anthrax evolved on the nucha and shoulders. I am myself possessed of the details of several; from among them I select one in which the disease occurred on the parietes of the abdomen, and which I attended along with M. Adelon. Among other remarkable peculiarities, the summit of the tumour in this case was covered from its first appearance with a broad, flat, sanguineous vesicle, the presence of which might have caused it to be regarded for a moment as a malignant pustule.

CASE XCIV.—*Anthrax*.—Baron M\*\*\*, almost fifty-five years of age, of a bilious and plethoric temperament, and subject to gout, summoned me on the 12th of October, 1822, on account of an inflammatory swelling which had made its appearance, without known causes, on the left hypogastric region. This swelling had been evolved three days previously in the shape of a small, hard, deeply seated pimple, highly inflamed, extremely painful, and having the look of a common boil. A broad, flat, bloody vesicle had formed on the surface of this small tumour on the second day after its appearance. This circumstance having excited fears lest the case should prove one of malignant pustule, a grain of caustic potash had been applied to the inflamed part.

When summoned, I remarked the following particulars: a flattened oblong tumour, of a deep red colour, hard to the touch, very hot and very painful, nearly three inches in its transverse diameter, and an inch and a half from above downwards across its middle, occupied the anterior and inferior part of the abdomen. A small eschar six lines in diameter appeared on its middle, which had been produced by the application of caustic. The disease appeared to be of a purely local nature, and was unaccompanied by any appreciable disorder of the chief functions of the body (*fifteen leeches applied circularly at the distance of an inch from the tumour; cool emollient cataplasms, and to promote the bleeding from the leech bites, a warm bath*). These measures only gave very momentary relief. During the following day and night the inflammation made rapid progress both in superficial extent and in depth. The pain became excessively severe; the redness of the skin, verging on a violet, spread transversely, and the tumour, next day less flat than heretofore, formed a longitudinal swelling, similar to that which is produced by pinching up a broad roll of the skin. The patient was now troubled with pains of the bowels and retching, the pulse had got full, and the belly was tense. I proposed and immediately performed the incision of the tumour. Its lengthened shape, however, induced me to confine myself to a single transverse cut, which passing through the entire thickness of the skin and subcutaneous cellular substance, was at least six inches in length, and extended from beyond the bounds of the inflammation, at either end, near the median line to the middle of the left flank. The incision was followed by the discharge of a considerable quantity of blackish blood, a marked diminution of the pain, and

are many examples of the disease, in which the swelling is but small, and constitutional disorder proportionally slight; in these simple incision suffices; in a day or two the slough is discharged, and granulation advances favourably.—*Miller's Principles of Surgery*, Am. edit., pp. 225–6.

<sup>1</sup> Willan. An inquiry into the antiquity of the small-pox, p. 67.

<sup>2</sup> Celsus. De re medicâ, lib. v. sect. xxviii. n. 9.

<sup>3</sup> Cadet. Diss. sur l'anthrax, 4to. Paris, 1833.—Leçons de M. Dupuytren. (Lancette Française, 21 Mars, 1833.)

relief of the abdominal symptoms, the occurrence of which had caused me serious alarm. (*Cool emollient poultices to the tumour; eau sucrée for drink; low diet.*)

The wound continued during four or five days from this time to discharge a quantity of purulent and bloody fluid. The oval formed by the anthrax began to contract from the third day after the operation, but the lips of the wound presented an appearance peculiar to this disease. On their edges a number of white points were distinguishable, formed evidently by the summits of the conical-shaped sloughy cores; several, indeed the greater number of these, could be laid hold of with the forceps, and taken away without pain; others still adhered by their deep extremities. These conical-shaped cores were of a yellowish-white colour, and pretty tough. On the eighth day after the operation the edges of the wound were irregularly indented, and presented numbers of small semicircular notches in the points which the cores had occupied. The wound was dressed regularly till the 2d of November, with a perforated pledget spread with cerate, compresses of lint, and an emollient cataplasm. A sloughy core made its way out at a point near the middle of the inferior half of the swelling. The ragged or toothed condition of the lips of the wound certainly retarded the cicatrization, which was nevertheless completed by the 18th of November.

Two small furuncles appeared: the one on the epigastric region, the other near the umbilicus. They both got speedily well spontaneously.

From this time to the 1st of August, 1826, Baron M\*\*\* had no attack of gout; neither did he suffer from certain fits of pain in the bladder, which used occasionally to alternate with the paroxysms of this disease.

## V.—GANGRENÆ. GANGRENOUS INFLAMMATIONS.

605. The distinguishing characters of the gangrenous diseases of the skin are their origin in a specific cause, and their rapid termination in gangrene.

The disease entitled Anthracion, Persian fire, and Malignant Pustule, may be taken as the type of this group, in which may be included pestilential bubo, typhoid gangrene, and the gangrenous affection of the cheeks and genital organs of children.

I shall here confine myself to a description of Anthracion, and indicate the features that distinguish it from the rest of the gangrenous affections.

## ANTHRACION.

Vocab. *Anthracion, Carbuncle, Malignant Pustule, Persian Fire.*

606. Anthracion appears in the shape of a large vesication or bleb, full of a sero-sanguinolent fluid; under this a small lenticular induration is formed, which is itself speedily surrounded by a phlegmono-erysipelatos areolar swelling, a larger or smaller portion of which is before long stricken with gangrene.

607. Enaux and Chaussier,<sup>1</sup> and a great many pathologists who have followed them, are of opinion that anthracion constantly follows inoculation, being produced by the contact of this gangrenous tumour, or of the offal of animals which have been affected by the disease. In support of this view they appeal to the following facts: 1st. Anthracion has been seen most frequently among smiths, veterinarians, shepherds, graziers, tawers, tanners, butchers, knackers, mattress-makers, &c., in a word, among individuals who have the care of animals, or who handle their carcasses and offal. 2d. Anthracion appears exclusively on such parts of the body as are habitually uncovered, such as the face, neck, hands, arms, &c., or upon others

<sup>1</sup> Enaux et Chaussier. Manière de traiter les morsures des animaux enragés, et de la vipère, suivie d'un précis sur la pustule maligne, 12mo, 1785.



which have been exposed accidentally. 3d. The disease has been more especially observed during epizooties with an eruption of bubos.

The same pathologists conceive that the sanguinolent serum poured out by the disease is one of the means by which it is propagated.

We are even informed that the blood of a sheep labouring under the disease having flowed over the back of a shepherd's hand, gave occasion to the development of anthracion, and that a butcher was attacked with the same formidable malady in the tongue, merely from having taken the knife, with which he was skinning an ox that had died of the disease, between his teeth for a few seconds. These statements are in perfect accordance with the results obtained by M. Leuret,<sup>1</sup> in his experiments on the changes undergone by the blood in different diseases.

Some would even persuade us, that the blood of an animal, not labouring under any gangrenous disease, but altered from other circumstances, may occasion anthracion when applied to the skin of man. In confirmation of this, the cases of two butchers of the Hôtel Royal des Invalides are quoted, who were attacked with anthracion from having killed and prepared the carcasses of a couple of oxen, overdriven, but in other respects perfectly healthy. The truth of this opinion, however, is extremely problematical.

Thomassin tells us that a woman, whilst engaged in dressing the gangrenous bubo of her husband, having touched her cheek with her fingers, soiled with some of the discharge from the sore, became affected within two hours with anthracion, in this situation, which spread with an alarming rapidity.<sup>2</sup> Hufeland speaks of a woman who caught the disease from having lain with another female labouring under anthracion. On the other hand, M. Jemina,<sup>3</sup> on the authority of his father, of different other practitioners, and of various experiments, communicated to Malacarne, (Brera. Giornale, vol. i., p. 460,) maintains that anthracion contracted from the contact of an animal affected with the disease, cannot be transmitted from one individual of the human species to another. In confirmation of this view I may state here, that one of my pupils, M. Bonet, of Poitiers, had the courage to inoculate himself with the matter of anthracion, without suffering any inconvenience from the operation.

It would appear, further, that anthracion is occasionally evolved sporadically in the human subject. No one doubts that the nine cases of *gangrenous pustule* (pustule gangreneuse) detailed by M. Bayle<sup>4</sup> are instances of true *anthracion*; yet this very accurate observer informs us, "That almost the whole of these patients were certain of never having touched the remains of any animal which had died of malignant pustule (charbon), and that those who had lately eaten any animal food were certain of having partaken of no flesh that was suspected." M. Davy la Chevré<sup>5</sup> has given six cases of anthracion, and in none of them is there any mention made of the patient having contracted the malady from another individual, or from a diseased animal.

Anthracion is believed to be pretty common in several districts of France;—in Lorraine, Franche-Comté, and especially in Burgundy. The disease is rarely seen in Paris. I have, however, met with it among tanners, butchers, and, more frequently still, among workmen who manipulate leather, and mattress-makers. During the three years that I was attached to the Hôpital St. Antoine, I saw several cases which all came from the same manufactory, in which the business of cleansing and preparing hair, imported from Russia, was carried on.

608. *Symptoms*.—When anthracion is communicated by way of contagion, the interval that elapses between the time at which the infection was received and the appearance of the gangrenous spot of

the skin, varies from a few hours to five or six days. Making the gravity of the symptoms the basis of a division, the whole of the cases of anthracion that occur may be arranged under three heads: 1st, *slight anthracion*, with circumscribed mortification; 2d, *severe anthracion*, with diffused mortification; 3d, *fatal anthracion*, with alteration of the blood, and affection of one or several of the viscera.

609. 1st.—Anthracion with circumscribed mortification. The animal poison which produces anthracion is occasionally limited in its effects to the excitement of a trifling degree of inflammation which I have seen several times, and which M. Davy la Chevré has described under the title of *pustule maligne prominente*. It begins with a seropurulent elevation, the base of which, hard, tense and deeply-seated, is not long of being surrounded by a phlegmono-erysipelatous inflammation. The central point of the tumour is attacked with gangrene, but it rarely happens that the mortification extends beyond this its primary seat; the morbid process stops spontaneously, and almost at its outset. Case XCVI belongs to this variety.

610. 2d.—Anthracion with diffuse gangrene. This variety begins with a considerable degree of pruritus which is succeeded by the appearance of a red spot like a flea-bite. The vesicle, of the size of a millet-seed at first, soon acquires larger dimensions, and, if not ruptured by the patient, bursts spontaneously. Twenty-four or thirty-six hours after the attack, a small, hard, and circumscribed nucleus, having the form and size of a lentil, is perceptible under and around the seat of the vesicle; in the circumference of this a soft, but still resisting swelling, of a reddish or livid colour, covered by and by with secondary sero-sanguinolent vesicles, at first isolated, but speedily becoming confluent, is developed. The central point, now of a brownish hue, extremely hard and very insensible, becomes gangrenous. The inflammation extends to a considerable distance; the neighbouring skin is red and shining; the subcutaneous cellular tissue is puffy, tense, and to appearance emphysematous. The diseased part is numb, without proper sensation, and the gangrene advances with rapidity.

If the disease ceases to make further progress, an inflamed circle of the most vivid red appears around the eschar; the tumefaction which had spread extensively diminishes at the same time, and the patient feels something like an agreeable warmth accompanied with a pulsatory motion of the part affected. The pulse revives; the strength increases; occasionally some degree of fever occurs which is speedily resolved by a gentle perspiration; suppuration sets in between the living and dead parts, and the detachment of the eschar leaves a suppurating surface of various extent in different cases.

Should the disease, on the contrary, tend to an unfavourable issue, general symptoms of great severity occur: the pulse is small and contracted; the patient complains of a feeling of anxiety; he is attacked with fainting fits; the tongue is dry and brown; the features are shrunk; the skin is parched; the eyes are glassy; the moral courage and physical strength are gone; cardialgia and low delirium precede the fatal termination.

The duration of the different stages of this variety of anthracion is uncertain; that of the incubation varies between one and two hours and several days; the second, characterized by the formation of the primary vesicle, extends to an interval of from twenty-four to thirty-six hours; the third, marked by the evolution of the central nucleus and the appearance of the areolar tumour, does not generally exceed a few hours; the fourth and last, announced by the occurrence of gangrene and other local and general symptoms of different degrees of severity, varies from one to several days according to the issue which the disease is to have.

611. 3d.—Anthracion with alteration of the state of the blood or affection of the viscera.—In this variety, the symptoms advance with frightful rapidity; death occasionally intervenes within the first eighteen or twenty-four hours from the invasion of the disease. The alteration of the skin is occasionally of no great amount; and the fatal termination and the formidable symptoms that precede the catastrophe are only explicable on the supposition of some change having taken place in the state of the blood, or the occurrence of gangrene in some of the principal viscera. (Vide Cases XCVI and XCVII.)

612. Anthracion, further, is not without its varieties according to the regions of the skin upon which it is developed.

<sup>1</sup> Leuret. Recherches et expériences sur les altérations du sang, 4to. Paris, 1826.

<sup>2</sup> Thomassin. Diss. sur le charbon malin de Bourgogne ou la pustule maligne, 8vo. Basle, 1782, p. 31.

<sup>3</sup> Journal gén. de médecine, t. 54, p. 144.

<sup>4</sup> Bayle (G. L.). Considérations sur la nosologie, la médecine d'observation et la médecine pratique, suivies d'observations pour servir à l'histoire des pustules malignes, 8vo. Paris, 1802.

<sup>5</sup> Davy la Chevré. Diss. sur la pustule maligne, 4to. Paris, 1807.—I ought to add here that in a great number of cases evidently belonging to anthracion in their symptoms, it has been impossible here to trace the disease as having been transmitted by contagion. See the case of M. Liétré, quoted lower down, and that of M. Carrel, (sur une gangrène de la lèvre attaquée infructueusement par le feu et suivie de mort). Recueil de la société de Santé de Lyon, 8vo. 1798, p. 308, &c.



1st.—*Anthracion of the face* is not merely accompanied with a phlegmonous erysipelas of the features, but the puffing and inflammation occasionally extend to the neck and fore part of the chest. When the eyelids are the primary seat of the affection, it occasions an enormous and very painful tumefaction of the face, accompanied with intense headache or delirium, occasionally with the loss of the eye, always by the eversion of the eyelids, which are then frequently formed by the orbicularis muscle and the conjunctiva alone. When the upper eyelid is the only one implicated, the lower is often seen to be carried somewhat further up than usual, in consequence of the efforts made by the patient to preserve the eyeball from the action of the light; there is an abundant flow of tears; the transparent cornea inflames and speedily becomes opaque. To remedy the destruction of the eyelids consequent on this affection, it has been proposed to restore them by means of an operation on the same principles as those of the Rhinoplastic or Taliacotian process.

Wherever muscular fibres are contiguous to the skin, it is observed that there the gangrene extends less deeply. Nevertheless, when the lower lip is attacked with anthracion, this part is apt to be destroyed through a considerable extent, either by the disease or the action of the caustics employed with a view to arrest its progress. The deformity that results is attended with the constant and involuntary flow of the saliva.

2d. The development of anthracion on the neck is accompanied by a phlegmono-erysipelatos inflammation which impedes respiration and deglutition. Besides these, there are various other symptoms present, such as pytalism, nasal hemorrhage, swelling of the face, &c.

3d. Anthracion attacking the parietes of the thorax is always accompanied with inflammation of the subcutaneous cellular tissue of the thorax and axillæ.

4th. When the back of the hand or instep is the seat of the disease, every part of the limb is successively attacked with phlegmono-erysipelatos inflammation.

613. When anthracion becomes not merely a local but a general disease, unequivocal symptoms of an altered condition of the blood, of pulmonary (Cases XCVI and XCVII) or gastro-intestinal inflammation of an unfavourable description, or of the absorption of pus into the system, are observed.

In a case of gangrene of the lower lip, presenting all the symptoms of anthracion, M. Littré<sup>1</sup> found pus within the veins of the face, and a number of small abscesses in the substance of the lungs.

614. *Alterations of structure.*—Cases XCVI and XCVII will be found to illustrate not only the nature of the alterations induced by anthracion in the skin and cellular membrane, but several which occur in the state of the blood, and in the lungs and stomach, analogous to those which Chabert met with in the bodies of animals that had died of this disease (charbon). M. Virieul informs us that he found anthracion in the colon. M. Lambert<sup>2</sup> has given a good description of the gelatinous appearance of the serous deposits which are constantly found in the subcutaneous cellular substance, and occasionally in the cellular tissue of the mediastinum. A quantity of sanguinolent serum is very commonly found within the serous cavities in fatal cases of anthracion.

615. *Diagnosis.*—At its first appearance, and when it is still undistinguished by the hard and unequal elevation surmounted by a sanguinolent vesication, anthracion might be mistaken for the inflamed and painful induration produced by the bite of certain insects; these bites, however, may always be recognized by the presence of a minute central, and yellowish-coloured point.

Furuncle, at its commencement, shows no pustular or vesicular bleb on its summit, similar to that of anthracion, which, moreover, is speedily surrounded by a diffuse and emphysematous-looking inflammation, very different from any thing that is seen in furuncle.

When anthracion has acquired a very large size, and gangrene, to a greater or less extent, has taken place in a portion of integument, the disease can only be confounded with phlegmonous and gangrenous erysipelas, with the gangrenous affection of the cheeks and labia majora occasionally met with in children,<sup>3</sup> or with the bubo of

the plague. Phlegmonous erysipelas, however, is not preceded by a pustule or a sanguinolent vesicle in a particular point, and is not contagious; the disease, in fact, only ends in gangrene through excess of action; it is often treated successfully by blood-letting, a measure which is always prejudicial in anthracion.

Anthracion differs from the gangrenous affection in the cheeks of children in this: that the mortification in the latter malady begins on the inside of the mouth and only extends consecutively to the skin, and in the origin of the disease in this instance being altogether independent of contagion.

The local characters of anthracion bear the greatest similarity to those of the pestilential carbuncle; the latter, however, is preceded, and accompanied by the series of general and particular symptoms characteristic of the plague.

Several fruitless attempts have been made to distinguish anthracion from the malignant carbuncle of animals, especially from that which attacks sheep and other woolly cattle.<sup>4</sup> The disease in animals is, in effect, characterized by the occurrence of a very voluminous uncircumscribed tumour, which yields to pressure, crepitating like emphysema and exhaling a peculiar putrid odour. The centre of the swelling is black, as if burned or carbonized, its circumference is infiltrated with a brownish or yellowish-coloured fluid, and is distended with a very foetid gas; the substance of the heart is commonly found softened, and its external surface marked with spots of ecchymosis in the course of the blood-vessels; the blood contained in the heart and great vessels is generally fluid; in the veins it is very black, and occasionally in clots of a black or yellowish-white colour, the consistence of which is soft and gelatinous. The lungs, covered with small superficial ecchymoses, present here and there a number of black spots penetrating their substance deeply, and produced by a kind of local sanguineous infiltration. The inner coat of the stomach and intestines presents, in different places, blackish spots and prominences in the course of the vessels, formed by blood effused between the two inner coats, or under the peritoneal covering of these parts. The villous coat of the stomach is also occasionally found ecchymosed; the liver and spleen are gorged with blood; a degree of emphysema is often observed about the kidneys; no change is appreciable in the state of the nervous system. Now, in the anthracion of the human subject, the alterations that take place in the skin and subjacent cellular membrane are precisely the same as those discovered in the bodies of animals that die of malignant carbuncle. I have, further, had various opportunities of investigating extensive morbid changes in the organs of digestion and respiration, and in the condition of the blood, in the human subject, precisely similar to those which have just been described as occurring among animals. Lastly, the discharge that takes place from malignant carbuncle in the brute, applied to the skin of man, produces anthracion; the identity of these two affections consequently appears to me incontestable.

I shall by and by take occasion to speak of the analogy that subsists between anthracion and the Siberian carbuncle. (Vide Siberian carbuncle, in Vocab.)

616. *Prognosis.*—The first variety of anthracion, which is frequently described by writers, gets well spontaneously; the gangrene ends of itself. This happened in the case of a child, who was brought into the Hôpital de la Charité, in the year 1826, affected with anthracion of the upper eyelid.

The second variety is more serious; but its progress may very certainly be arrested by the use of caustics. The disease in the third variety is mortal, and may end fatally within twenty-four or thirty-six hours from the time of its appearance.

Whatever the form assumed by the disease, anthracion is always more serious when it attacks the head, neck, or eyelids, than when it appears on the extremities. It is very generally believed, also, that a very high or very low temperature aggravates the disease.

Anthracion occurring in women during pregnancy very commonly causes abortion.

617. *Treatment.*—As soon as the existence of anthracion is ascer-

<sup>1</sup> Journ. Hebdomad. Septembre, 1829, p. 449.

<sup>2</sup> Revue Médicale, 1830, p. 481.

<sup>3</sup> Baron. Mémoire sur une affection gangréneuse de la bouche, particulière aux

enfants (Bulletin de la faculté de médecine de Paris, 8vo. 1816.—Isnard. Essai sur une affection gangréneuse particulière aux enfants, 8vo. Paris, 1818.

<sup>4</sup> Huriel d'Arboval. Dictionnaire de médecine et de chirurgie vétérinaires, 8vo. Paris, 1826. Art. Charbon.



tained, the part affected must be deeply scarified and extensively cauterized. To be effectual, the incisions must implicate the whole of the mortified tissues, without, however, extending beyond the dead or dying parts. In the beginning of the disease the vesication must be opened, the fluid it contains absorbed with a little lint, and the denuded part covered with a dossil of a corresponding size, dipped in the liquid muriate of antimony, or with a small fragment of caustic potash, kept in its place by means of a strip of sticking plaster and a proper bandage. Five or six hours afterwards, this application must be taken away and the eschar covered with a piece of lint spread with the unguentum resinosum or some salve of a similar description. Next day, if it is found that no vesicular areola has been formed around the eschar, if the patient complains of but little pain, without smarting or pungent heat, we may conclude that the cautery has included the whole of the disease; if, on the contrary, a hard and deep-seated tumour has appeared around the primary seat of the disease, and symptoms of phlegmono-erysipelatous inflammation are present, the caustic must be applied again, taking the precaution first to remove the gangrenous parts, after dividing them by a crucial incision. This procedure is also proper when the slough which forms the centre of the swelling has already become hard and impermeable like a piece of dried hide; this must necessarily be removed to admit of the action of the caustic being expended on parts not yet sphacelated, after which they are to be covered with a tonic cataplasm.

The value of escharotics in the treatment of anthracion is incontestable. They are indicated so long as the gangrene shows a disposition to spread, or as its limits are not clearly defined. There are cases, however, in which these means, even when they have succeeded in checking the local disease, prove unavailing in warding off a fatal termination. When the *peculiar contagion* of anthracion has extended its influence to the blood, when it has caused a gangrenous affection of the stomach, or pneumonia of a bad character (Cases XCVI and XCVII), or otherwise, when pus has been absorbed into the system after the occurrence of gangrene, the disease is invariably fatal in its effects.

618. Acidulated diluents and wine mixed with an equal quantity of water are the remedies that are most commonly exhibited internally. The tartrate of antimony and purgatives have been recommended as calculated to subdue certain gastric symptoms. I have not myself had any opportunity of observing the effects of these medicaments in anthracion. They may possibly prove useful in the third variety of the disease against which merely local measures are always unavailing.

In several cases of the least serious kind of anthracion, and when there was no symptom of constitutional infection present, after having cauterized the part affected, I have used *compression* successfully as a means of removing the erysipelato-phlegmonous inflammation surrounding the gangrenous point.

I have also tried the local application of leeches in a case of prominent anthracion, without any serious ill effects, indeed, yet with such results as would prevent me from prescribing local blood-letting in any future case of the kind.

I have seen several cases of anthracion occurring on the forearm, which were attended with gangrene of such extent and depth as to require the amputation of the limb at a point above the diseased structures; the greater number of these cases terminated fatally.

The deformity and destruction of parts, consequent on the ravages of anthracion, frequently require surgical operations for their restoration. M. Lallemand<sup>1</sup> has given the details of the case of a little girl attacked with anthracion of the face in whom, by means of a very ingenious process, he succeeded in restoring the loss of substance which had happened in the under lip. (a)

(a) Closely akin to anthracion, if not one of its varieties, is gangrenous erysipelas, as described in pp. 66 and 67 of this volume, and the "Diffuse Cellular Inflammation" of English writers. Dissecting wounds and abscesses belonging to this order are especially apt to prove dangerous and fatal, if the subject examined had died of peritoneal inflammation. Mr. Nunneley describes the disease as a variety of erysipelas under the head of "cellular variety."

### Historical Notices and particular Cases.

619. Celsus describes anthracion under the name of *carbuncle*.<sup>2</sup> Guy

"The cellular variety, like that which equally involves both skin and cellular membrane, varies much in its violence, and owing, perhaps, to its being principally seated in the cellular membrane, which is the especial locality of true phlegmon, in mild cases, it presents us with a very near approach to circumscribed phlegmon. The mischief varies from little more than a whitlow, or a suppurating absorbent gland, to that form of the disease which induces a destruction spreading over almost half the subcutaneous cellular membrane of the body. So also does the rapidity of the disease differ much; in some cases it proves fatal in a few hours, in others not for many weeks, when the patient dies rather from the effects of the disorder than from the complaint itself.

"In the majority of cases the constitutional symptoms are preceded by some local affection, but not invariably, for at times the constitutional derangement appears without any local complaint, and the patient seems to be suffering under typhus fever, for which,<sup>3</sup> indeed, in more than one case, the disease has been mistaken; yet, even in these cases we may generally avoid the error, for in simple typhus the disorder only reaches its height after some time, but in this affection at a much earlier period, usually in a short time, as two or three days. There is intense local pain in the punctured part, if a puncture has been the exciting cause, with enormous diffuse swelling, and more or less redness.

"When the disease arises from venesection, the wound in the vein sometimes heals and remains so; at others, after having healed, it again opens; but more commonly it does not close at all, but remains open, the edges becoming thick, irritable and gaping, and there is a discharge of a thin, semi-purulent matter.<sup>4</sup> From this point the disease spreads as from a centre, though more towards the shoulder than towards the hand. Sometimes, although venesection may appear to have been the immediate exciting cause, the punctured vein is not found to have been implicated. In most cases, if the disease arises from the application of poison, as the bite of a serpent, or from a wound received in the examination of a body, there is a small vesicle or pustule which forms at the wounded spot, and which Dr. Colles appears to regard as possessing specific characters. However extensive the suppuration may be, there is seldom much in the immediate vicinity of the wound. In most cases the violence of the disease seems to be expended about the axilla and in the region of the pectoral muscles. The redness of the skin is not so conspicuous in this as in the preceding variety; it is, however, never altogether wanting; in all cases, at one period or another, the skin participates in the disease, sometimes very extensively. At times vesications occur, though not so frequently as in the cutaneous variety, which, indeed, we should not expect, inasmuch as they are the effect of the external surface of the dermis being inflamed. The large vesications which appear at a later period are more like the phlyctenæ preceding gangrene of the skin, which changes colour and undergoes precisely the same processes which were spoken of in the cellular-cutaneous variety. In one circumstance only does the gangrene in this variety differ from that which occurs in the former, namely, that the muscles are much more frequently affected. On account of the inflammation being deeper seated, it oftener passes beneath the fascia, when the muscles become soft, black, and completely disorganized. It is a matter of doubt if this arises from the muscular structure itself being inflamed, as Dr. Duncan supposed: to me it rather appears to result from the same circumstances as gangrene of the skin; in both cases the cellular matrix, in which the nutrient vessels and nerves pass to their distribution, is destroyed, and with it the vessels and nerves; as a necessary consequence the death of the part ensues."—Nunneley on *Erysipelas*, pp. 147–8, Am. edit.

<sup>2</sup> Celsus. De re medicâ, ed. Ratier et Fouquier, lib. v. secl. xxviii. n. i.

<sup>3</sup> Duncan in Edinburgh Med. Chir. Trans., vol. i. p. 602. Dr. Colles in Dublin Hospital Reports, vol. iii. p. 209.

<sup>4</sup> In the milder forms of this disorder, which follow venesection, and which every practitioner must have often seen, this opening in the integuments serves as a vent through which the discharge takes place, when, after a few days of fever and irritation, the patient recovers.

<sup>1</sup> Archives génér. de médec., t. iv. p. 242.



de Chauillac<sup>1</sup> notices the principal features of the disease. Thomassin, Enaux and Chaussier have given us interesting remarks on anthracion generally. M. Costalat<sup>2</sup> has related the history of a case of the disease affecting the upper eyelid *without any surrounding erysipelatous areola*, but attended with alarming symptoms. M. Blandin<sup>3</sup> has published a case of anthracion *excited by contact with an animal affected with no gangrenous disease*, and cured by the application of the acidulous nitrate of mercury. M. Lisfranc<sup>4</sup> has made several remarks in favour of the actual cautery which he prefers to any form of potential caustic.

Anthracion has been seen complicated with œdema of the glottis;<sup>5</sup> additional observations on the disease and its complications may be found inserted in various periodical publications.<sup>6</sup>

CASE XCV.—*Circumscribed anthracion; cauterization; compression.* P. Monserant, Tawer, 26 years of age, and of good constitution, entered the Hôpital de la Charité, on the 12th of September, 1833. This man had been engaged in working among hides stripped from animals that had died of disease, when on the 4th of September, he perceived, without any premonitory symptoms, a small pointed spot surrounded with a red areola very like that which follows the bite of a gnat on the palmar aspect of the right forearm. Next day another small, very hard and non-vesicular spot made its appearance on the back of the hand of the same side. The first was so itchy that the patient soon tore it with scratching; the excoriation speedily became covered with a small black eschar, which two days afterwards was nearly two lines in diameter. Up to this period no constitutional affection had been perceived, but on the 7th, the arm began to swell, the axillary glands to grow painful, and febrile symptoms of considerable severity, attended with lassitude and pains in the back and limbs, set in, together with urgent thirst and a loss of appetite. Diluents, and emollient cataplasms seemed to relieve this state of affairs. The arm became less painful in the neighbourhood of the eschar which was surrounded by a circle of the cuticle detached by the effusion of a little purulent fluid beneath it.

When the patient gained admission into the hospital the constitutional symptoms had declined greatly. The right forearm presented an eschar five or six lines in diameter, depressed, dry, black, hard, surrounded by a very narrow red circle, which itself was circumscribed by a reddish areola covered with small epidermic squamæ. Although the distension of the skin was not considerable, the arm was still swollen, shining and red, especially on the dorsal aspect of the hand, and the forearm pitted on pressure. The patient made little complaint of pain, but rather of an unpleasant feeling of tension. The pulse was not increased in rapidity. After dividing the eschar, the part was touched with chloride of antimony, and the whole arm was firmly bandaged from the fingers to the axilla. The night between the 12th and 13th was good, and in the morning the patient was found almost entirely free from fever. The swelling of the arm had diminished, and the redness of the skin was succeeded by a yellowish tint, which gradually acquired a degree of intensity equal to what is observed after the resolution of an ecchymosis. Every thing went on favourably under the same plan of treatment: the slough becoming detached on the 18th, and the wound being healed over on the 30th of September, the patient was discharged.

CASE XCVI.—*Anthracion with gangrenous ulceration; death.* Ch. Chibot, a hair manufacturer, entered the Hôpital St. Antoine, on the 28th of May, 1829. This man had been out of health for some time. On the 23d he was so unwell that he could not go to his work. On the 26th the feeling of weakness and prostration increased; he was troubled with cough and retching. Nearly a month before his recep-

tion into the hospital he had had an eruption of itchy spots upon the elbow which became more troublesome than usual on the day he first felt seriously indisposed. According to the patient, weakness, prostration and spitting of blood are symptoms of frequent occurrence among the workers in hair. His daughter had died after an illness of five days with symptoms of this description, and one of his fellow-labourers had sunk some time previously, in two days. A young man 18 years of age, who worked along with the patient had been successfully treated for anthracion of the thigh in the Hôpital St. Antoine.

Chibot on the day of his entrance was extremely weak, and had fainting fits. The left lateral region of the neck is of a pale red, and slightly shining; there is a degree of puffiness on the same side, under the clavicle and towards the roots of the hair, where there is observed a gangrenous spot, the size of a split pea, which had been preceded by a pimple or spot, destroyed by the patient with his nails. A yellowish and not very consistent fluid, which stains the pillow, is poured out by the little ulcer, in the vicinity of which a number of small pustules, full of a somewhat turbid liquid, are perceived. The surface of the sore, when touched, causes no sensation of pain. A great degree of swelling extends over the whole of the left side of the neck, the ramus of the lower jaw, the shoulder, involving the clavicle and extending down both behind and before upon the chest. The touch conveys a feeling as if a quantity of fluid were effused into the cellular membrane under the skin, the sensation of œdema being in some places very distinct, whilst in others it seems as if a gaseous body were displaced by the fingers, as in emphysema. The base of the tongue is loaded with a yellow fur; the abdomen is slightly painful to pressure. The patient coughs at times; the thorax, generally sonorous, is however less so on the right than on the left side. The pulsations of the heart are weak. The patient complains of oppression, of a sense of sinking about the præcordia, as if the heart were compressed, and of wandering pains in the limbs. The pulse at the wrist is small and shrunk; the feeling of weakness is extreme, so that the patient cannot sit up, but sinks immediately like a lifeless mass, retaining the same position in which he happens to fall. The patient is haunted with the notion that he will not recover. (*Decoction of bark edulcorated.*)

At 4 o'clock the prostration had increased; I touched the whole surface of the sore with the red-hot iron. (*A tonic draught with bark and ether; weak wine and water.*)

30th.—The patient has had no sleep, but feels a little better; he is not so much sunk as yesterday, and the constriction of the chest is less. Pain in the abdomen, increased by pressure; right side of the thorax expanding little; no cough nor expectoration; posteriorly a slight degree of crepitating rattle can be perceived; diarrhœa. A little broth, which the patient had taken, as well as the tonic draught, were rejected by vomiting; the wine and water could alone be retained. (*Wine and water, decoction of bark.*)

31st.—The patient says he feels better; he pretends that the wine intoxicates him; the pulse continues small. Towards evening the oppression increased, the pulse became imperceptible, and the patient died during the night, having retained his faculties to the last.

*Sectio cadaveris*, 28 hours after death. The nervous centres and their membranes were healthy. The right lung, although gorged, was soft, crepitating, and torn with difficulty, especially about its middle; the upper part was sound, and nothing escaped on its being divided. The blood and tissue of the lung in other situations appeared amalgamated. The cut surface looked black, and nothing was removed from it by scraping with the scalpel. The left lung was healthy. The heart was natural; its right cavities were filled with blood from which a few bubbles of air escaped.

When the abdomen was laid open, about a pint of yellowish liquid made its escape; by pushing the bowels aside, a darker-coloured puriform fluid was observed between the stomach and liver; on the convex surface of the latter viscus there were some shreds of false membrane, loose, transparent and tearing readily. The omentum majus and outer surface of the stomach were of a red colour, owing to the accumulation of blood in the veins. Black points were scattered here and there over the small intestines. The stomach was four times as large as it is in the natural state, and appeared distended with fluid; but it was nearly empty, its walls being in many places more than an inch and a

<sup>1</sup> "C'est pustule phlémonique mâle, vésicante et brûlante. Le lieu où elle est noire et encadrée, ayant rougeur obscure et douleur et ardeur et vésication à l'environ, de laquelle vient, quant est rompue, eschare telle comme fait venir combustion et cautère." (Le Guidon, trad. par J. Canappe, 8vo. Lyon, 1538, p. 87, du Carbonele.)

<sup>2</sup> Journ. Hebdomad., t. i. p. 51.

<sup>3</sup> Journ. Hebdomad., t. iv. pp. 417-19.

<sup>4</sup> Journ. Complément des sc. médic., t. xxxix. p. 304.

<sup>5</sup> Journ. Complément des sc. médic., t. xxxix. p. 321.

<sup>6</sup> Decaris. Pustule maligne guérie par le phosphore à la dose de trois grains dissous dans une once d'éther, par 24 heures (Revue médic., t. xv. p. 429).—Schwan. Vingt-deux personnes guéries par des lotions avec la décoction d'écorce de chêne d'Hahnemann sans cauterisation. (Revue médic., t. xvi. p. 463.)



half in thickness, and communicating to the touch the same sensation as the parietes of the abdomen when pinched between the fingers. Its mucous membrane presented six round or oval-shaped patches, black in the centre, yellow in the circumference, upon some of which the membrane could still be traced, although it was softened, and removable with the slightest touch, as if it had been in a state of putrefaction, which, however, did not appear to be the case, as no gangrenous odour was emitted. The mucous membrane was separated from the subjacent cellular membrane (which was thickened, loaded, and covered with intermingled red patches and white points), by a thick black fluid. The disorganized patches were surrounded by a yellowish areola, of varying breadth, where the mucous membrane was more consistent. Some of these were of the size of a crown piece, others considerably smaller. The mucous membrane generally tore with ease,—its natural wrinkles were effaced and it could be marked or traced upon with a very slight degree of pressure; the cellular membrane under it was thickened, and in a state at once of emphysema and œdema.

At the distance of two or three inches below the duodenum, which was healthy, there was a dusky-red spot in the small intestines, on which the mucous membrane was somewhat softened. A little lower, one of the valvulæ conniventes formed a dusky-red ridge, from the deposition within the subjacent cellular membrane of a quantity of blackish fluid which could be forced out by pressure.

On cutting through the external gangrenous tumour which had been eauterized, the cellular substance around it was found infiltrated and somewhat redder than natural. Towards the middle of the neck a quantity of blood was found effused into and between the fibres of the muscles, the cellular substance, &c., penetrating every tissue nearly to the depth of the vertebræ. The larynx was even stained. The glands of the neck were also red and enlarged, and full of dark-coloured blood. The structures on the right side of the neck as well as all the other organs of the body appeared natural.

CASE XCVII.—*Anthraxion of the eyelids. Extensive gangrene; death.*—Joséphine, a carter of mattresses, on the 12th of July, observed a small red spot, the size of a pin's head, on the outer angle of her left eye. On the 16th, this spot spread and caused some swelling of the eyelids and cheek. On the 20th, the whole of the upper and under eyelid, including the eyebrow and part of the temple, over an extent of an inch and a half in perpendicular by about the same amount in longitudinal extent, were stricken with sphacelus, and covered with a moist, brown, sanguinolent and deep slough. The outer part of the orbit was swollen and emphysematous, and the cheek, forehead, and upper part of the neck were tumid, hard, and of a violet-red colour in the vicinity of the slough. These parts were not affected as in phlegmonous erysipelas with any preternatural heat. The eyelids thick, stiff and as black as charcoal, but still moist, could not be separated from each other; so that the state of the eyeball could not be ascertained. The pulse was very small; the extremities were cold. The breathing appeared natural; the intellectual faculties were untouched. The mode in which this gangrenous affection commenced; the transformation of the spot that was first discovered into an eschar; the erysipelatous areola without morbid heat, with which it was surrounded—all these circumstances combined, led me to believe the case one of *anthraxion*, a diagnosis, the accuracy of which was subsequently confirmed by the post-mortem examination. An incision was carried along the lower eyelid in the direction of the cheek bone: it was nearly an inch deep, scarcely attended with any pain, and gave exit to a quantity of blackish blood. By separating the lips of the wound a line formed by the black and dry skin was first perceived, and under it, a dark-coloured layer, infiltrated with blood and insensible. A second transverse incision of less depth than the first, lest the eyeball should have been implicated, was made across the eyelid; and a third incision, more than half an inch deep, was carried from the alæ nasi obliquely towards the lower end of the lobe of the ear. This cut bounded the violet hue of the skin inferiorly. Along the two outer thirds of this cut the skin appeared simply red and erythematous, not sphacelated, and the adipose cellular membrane under it looked healthy. At its inner third, on the contrary, the cellular membrane presented three or four brownish spots, like ecchymoses. From the lower end of this incision a fourth was carried obliquely upwards towards the upper part of the

anti-tragus; it was about a third of an inch in depth. A certain quantity of dark-coloured blood flowed from this incision, the bleeding from which was encouraged by tepid fomentations. Dossils of lint, dipped in a strong solution of the acid nitrate of mercury, were then passed repeatedly along the surface of the different incisions. The portion of healthy skin included between the incisions was not touched with the caustic. M. Beaumetz, my dresser, sponged away the blood and sanies that flowed from the incisions; his hands remaining soiled during 55 minutes without any ill effect. Dry lint was then introduced between the lips of the wounds, and compresses impregnated with a solution of chlorate of lime applied over the sphacelated parts (*decoction of bark; sulphate of quinia 12 grains*). The patient was placed with her head well raised.

For two days this plan was pursued, and the gangrenous affection of the cheeks appeared to be arrested; but it then began to extend; gastric symptoms appeared; pneumonia made silent progress and the patient died.

*Sectio cadaveris 30 hours after death.* The interior of the cranium presented nothing remarkable. On the left side of the face the parotid gland was hard and yellowish. The portio dura of the 7th pair, at the point of its escape from this body, was unchanged; it looked slightly greenish where it passed through the gangrenous cellular membrane; by pulling this nerve gently it could be isolated from the surrounding softened structures. The veins presented no peculiar morbid appearance. The branches of the external carotid artery were unaltered. The gangrene extended below the level of the inferior incision. The skin being softened, greenish, readily separating from the subjacent tissues, and exhaling the peculiar odour characteristic of gangrene. The subcutaneous cellular substance of the eyelids and malar region was gangrenous, black, and impregnated with a greenish-coloured sanies. The masseter muscle was greenish on its outer surface; but its fibres, where they are in relation with the bone, were red and healthy. The orbicularis palpebrarum was in great part softened and gangrenous. The periosteum of the upper jaw and os frontis and parts round the orbits, was stripped off with the same ease as it is from bones that have undergone the process of maceration. The gangrene had extended to the whole of the soft parts in the same vicinity. There was, however, no trace of inflammation there,—no redness, no formation of pus. The conjunctiva was destroyed and the transparent cornea, generally opaque, was perforated with a triangular gap in its centre. The sclerotic coat and retina were healthy as were the deeper parts contained within the orbit. In the mouth an oval patch of the mucous membrane on the affected side was destroyed, and the parts with which this was in relation were green in colour. The larynx and trachea were unchanged. The lungs were gorged in some places, hepatized in others, and when cut into, the surface looked gray, purulent matter flowing from it when scraped with the scalpel. The heart and great vessels seemed healthy. The stomach presented numerous dotted red patches, an appearance which was also remarked in the small intestines and cœcum. Nothing remarkable was discovered in any other part of the body.

## VII.—PAPULÆ; PAPULAR INFLAMMATIONS. (a)

Vocab. *Papulæ.*

620. This group of cutaneous diseases is characterized by *papulæ*, that is to say, by hard and solid elevations, attended with pruritus,

(a) These are placed by Mr. Wilson, under the head of "*Depositive Inflammation of the Dermis.*" We subjoin his reasons for this arrangement.

"By the term 'depositive,' which I have selected only in the absence of a more suitable word, I mean to express that condition of the inflamed dermis in which plastic lymph is exuded by the capillary



which is always troublesome, and at times intolerable. These papulæ end by resolution and furfuraceous desquamation, and accidentally in excoriations.

621. The number of papular inflammations usually reckoned, amounts to three: lichen, strophulus, and prurigo. They might, however, with perfect propriety be reduced to two, strophulus being a mere modification of lichen peculiar to the new-born infant and suckling.

622. Papular affections may be confined to a single region of the body, upon which they occur *disseminated* or in *clusters*. The papulæ of lichen are red or inflamed; those of prurigo are nearly of the same hue as the skin in general; those of strophulus are of a vivid red, or of a dull white like the wheals of urticaria. The papulæ of lichen are scarcely so large as the head of the smallest sized pin; those of prurigo are somewhat broader; those of strophulus are very various in their dimensions. Papular inflammations have this peculiarity, that the pain they occasion is almost uniformly of the itchy kind. Lichen in its course may appear with the acute or chronic type; in prurigo the eruption is always thrown out slowly and in successive crops; strophulus presents very remarkable intermissions and exacerbations.

These three diseases may end in resolution or in desquamation; chronic lichen is frequently followed by very severe and obstinate excoriations.

623. It is only necessary to touch and to incise papulæ to be satisfied that they are solid and consistent, consequently that they are very different from vesicles and pustules, to which they bear some analogy in the particulars of size and form.

The investigation of the minute anatomical structure of these small granules is a subject of some difficulty. Their opacity and solidity, no fluid being perceptible in their interiors, even with the magnifier, are important features, besides those of a mere external nature already enumerated. But it still remains matter of uncertainty which of the elementary tissues of the skin contributes essentially to their formation. Several writers have supposed that the nervous papillæ of the skin, enlarged in their dimensions, were the parts more particularly interested; but this opinion appears by so much the less likely, as the fact is that papulæ occur but rarely on those districts of the skin which are most distinctly and abundantly supplied with papillæ, as on the palm of the hand and cushions of the fingers. Papulæ again have been supposed by Mr. Plumbe to be produced by the effusion

rete into the tissue of the dermis, so as to give rise to the production of small hard elevations of the skin, or pimples. In the preceding groups of diseases we have seen simple congestion of the papillæ of the dermis, effusion of the serous portion of the blood on the surface of the dermis, formation of pus on the surface of the dermis; but the alteration now under consideration is different from the whole of these; there is no inordinate congestion, there is no serous effusion, and no generation of pus. As far as my observation of the pathological characters of the present disease enables me to determine, there is effusion of plastic lymph into the tissue of one or more of the papillæ of the dermis, constituting a pimple of small size.

"The pathognomic symptoms accompanying pimples correspond moreover with the supposition of such a pathological structure; they are accompanied by incessant itching, a sensation which may easily be explained by reference to the moderate degree of pressure produced upon the nervous plexus of the papillæ by the effused lymph, or, probably, by the distension of the neurilemma of the nerves by the more fluid parts of the lymph, so as to affect the nutrition of the nervous substance. Pruritus is unquestionably a degree of pain, but it is one of a mild kind, and such as we see for the most part in papular eruptions of the skin, or when the dermis is returning to its natural state after inflammatory congestion of its tissue, or, again, when foreign substances, such as scabs and crusts, effused fluids, parasitic animalcules, &c., lie in contact with the skin.

"The diseases which are here characterized by the designation 'depositive inflammation of the dermis,' correspond with the order papulæ of Willan; and in this instance no difference of opinion exists among dermatologists as to the morbid affections admitted into the group."

of a very minute quantity of lymph into the dermoid tissue, with which this fluid unites when it is not re-absorbed: it is true that by pricking the larger papulæ of strophulus deeply with a needle, and squeezing them firmly between the fingers, a very minute globule of transparent serum may occasionally be expressed; but by resorting to the same procedure in cases of lichen and prurigo I have never succeeded in forcing out any thing but a drop of blood.

624. Strophulus appears particularly among new-born infants, lichen among children and adults, prurigo among children and the aged. None of these affections is contagious, but those who have been once attacked almost always experience returns of the disease under which they had laboured, at intervals more or less remote from each other, and it is observed that these relapses are particularly apt to follow atmospheric changes.

625. The papular are very distinct from the exanthematous inflammations, which present coloured blotches, not circumscribed elevations; they are not less evidently different from the bullous, vesicular and pustular forms of cutaneous affection, in which a serous or purulent fluid is effused between the external surface of the corion and the cuticle. Notwithstanding this, however, to discriminate between the papulæ of acute lichen and the minute vesicles of scabies and eczema, the eruption requires to be examined with great attention, and even to be pricked with a pin.

When the papulæ have been destroyed by scratching, or when they are replaced by furfuraceous patches or excoriations, the diagnosis is frequently so obscure, that accuracy is only at length obtained by the occurrence of fresh elevations, the formation of which being watched and discovered, that of those which may have gone before is inferred.

626. The papular inflammations are generally diseases of no great severity; though they are occasionally extremely rebellious. Various plans of treatment are practised in these cases, the activity of which ought to be in proportion to the extent and inveteracy of the eruption. Lichen *agrius* is one of the most obstinate of all the diseases of the skin.

#### LICHEN.

Vocab. *Lichen, Papulæ.*

627. Lichen is characterized by the simultaneous or successive eruption of itchy papulæ, reddish in their colour or of the natural hue of the skin, most commonly clustered together, but occasionally scattered, and occupying a particular region, or disseminated over the whole surface of the body. This affection usually ends in a furfuraceous desquamation; it terminates more rarely in superficial and very obstinate excoriations.

To make the description of the disease as complete as possible, Bateman reckoned six varieties of lichen, five of which had been determined by Willan. Some of these are marked by a particular arrangement of the papulæ, others by various modifications in the colour and in the intensity of the eruption. Lichen *simplex*, *L. pilaris*, *L. circumscriptus*, *L. agrius*, *L. lividus*, *L. urticatus*. A lichen *tropicus* has also been since admitted, a title under which the whole of the lichens developed within the tropics, and exasperated by the effects of excessive temperature have been included. These, however, do not actually constitute diseases different from one or other of the varieties already recognized.

The different forms of lichen occasionally occur with the acute type; but they are much more frequently chronic in their progress.

628. *Symptoms.*—1st. Lichen *simplex* may appear confined to a single region of the body,—to the face, neck, arm; or it first attacks one or other of these, the face and arm for instance, and spreads within the course of three or four days to the trunk and lower extremities, attacking particularly the external and posterior aspects of the limbs.

Lichen *simplex acutus* is characterized by small solid elevations of a red colour, not transparent, frequently acuminated, containing neither pus nor serum, and seldom exceeding a millet seed in size. This eruption is attended with a disagreeable sensation of tingling, espe-



cially during the night. The eruption, irregularly scattered over the skin, continues unchanged for seven or eight days, after which its red colour changes, and it ends in furfureous desquamation.

Lichen is seldom ushered in by constitutional symptoms,—fever, general uneasiness, &c., except in those cases in which the eruption is very abundant.

Although each individual papula does not continue longer than a week, lichen *simplex* may remain as a disease during many months, and even during several years. It then consists of a succession of eruptions,—Lichen *simplex chronicus*. Whilst one is disappearing another is evolved, and the disease in this way invades many different regions of the body, one after the other. Frequently when the cure seems accomplished, a fresh crop of papulæ breaks forth, in one case apparently from some change in the weather, in another from some moral cause, or some error in diet. In the majority of instances the fresh eruption is not heralded any more than the first attack by a febrile paroxysm; this phenomenon in fact is only observed during the course of the disease when the eruption is extremely abundant, or is complicated with some other inflammatory affection. Willan was mistaken when he imagined that lichen *simplex* was always preceded by febrile symptoms, and gave this circumstance a place in his general definition of the disease.

Lichen *simplex* may pass into the state of lichen *agrius*; the papulæ are then surrounded with a slight reddish areola, and appear to become confluent; the whole of the eruption does not always share in this exacerbation, which is occasionally observed to give a favourable turn to an eruption of long standing.

2d. Lichen *pilaris*. This variety does not differ from the preceding save in this: that the papulæ are evolved on points of the skin which are traversed by hairs. The bulbs of these seem occasionally to participate in the inflammation, which is always deeper than in lichen *simplex*. Lichen *pilaris* is almost always chronic in its nature; it is not uncommon to see it continue for several years.

3d. Lichen *circumscriptus*. This variety is characterized by one or several clusters of papulæ, pretty regularly circular in their shapes, and bounded by a well-defined edge. It occurs with particular frequency on the back of the hand, on the forearm, ham of the leg, and region of the sternum. The course of this variety is nearly the same as that of lichen *simplex*; it is, however, somewhat less obstinate. Some of the patches remain stationary for a certain time, and then get well spontaneously from the centre towards the circumference of the groups. Others of the patches, again, extend gradually, by means of fresh circles of papulæ, which, thrown out around the first formed, increase in size, and finish by becoming blended with them. Eruptions of papulæ clustered together in this way are in general less inflamed than the scattered granules of lichen *simplex*; I have frequently remarked them nearly of the same colour as the skin. At the same time that the edges of the groups extend, their centres become level or smooth, acquiring a pale rosy colour, with a slight tinge of yellow intermixed, and a furfureous aspect. Whilst the first formed clusters are undergoing the process of desquamation, new patches are developed, which terminate in the same manner as those that have gone before them. The disease is in this way prolonged indefinitely. In some cases the papulæ are arranged in small stripes, so as to simulate a rough line, which I have seen forming a kind of collar in front of the neck, extending from one ear to the other,—lichen *gyratus*.

4th. Lichen *agrius* is distinguished by its prominent and acuminated papulæ, of a vivid red colour, and running one into another over an erythematous surface, itself surrounded by a very marked red blush. The eruption of the papulæ in this variety is frequently accompanied with a febrile state, which commonly yields when this is accomplished. These papulæ cause a burning and intolerable sense of itchiness, especially during the night, and which is exasperated by irritation of every kind. The pruritus occasionally amounts to a kind of torture; patients not content with scratching themselves with their nails, which they do incessantly, seem to feel peculiar pleasure in tearing their skin with the roughest brushes they can lay their hands on. By these measures, as may be imagined, the points of the greater number of the papulæ are torn off; the skin becomes red and bleeding; a serous fluid exudes from the torn apices of the

papulæ, and concretes in the shape of yellowish crusts, somewhat rugous to the eye, but soft and very slightly adherent in fact. This advanced and very severe form of lichen *agrius* has been assimilated by Alibert with the excoriations of eczema, and included by him in his description of the *dartre squameuse humide*.

In the severe lichen *agrius* of old standing, the skin is dry, rugous, hard, and cleft with deep furrows, especially about the bends of the arms and hams, when these parts have been the seat of the eruption. These altered surfaces long remain dry and unyielding even under the influence of the vapour bath.

Lichen *agrius* is a form of disease that is pretty frequently encountered. It has no more certain term of continuance than the varieties that have already been enumerated. It may come to an end in the course of eight or ten weeks, or continue for months and even for years, the eruption never presenting more than simple remissions more or less remarkable. The disease is very apt to recur on changes in the state of the weather, when it has existed long on any one place, or when it has already attacked the same district of the skin oftener than once.

During the continuance of lichen *agrius* pain in the epigastrium, nausea, vomiting, diarrhœa, and several other functional disturbances of the digestive organs are occasionally complained of.

5th. Lichen *urticatus* is a variety which was first described by Bateman, and by him added to those already admitted by Willan, being designated on account of the analogy which it bears in several particulars to urticaria. Lichen *urticatus* is observed occurring more especially on the neck and lateral parts of the face; it is frequently attended with febrile symptoms, and appears and disappears within a short space of time. The papulæ which characterize it are of an irregular shape; they very much resemble the swellings produced by the bites of bugs or gad-flies, and are mixed with small inflamed and itchy papulæ. Whilst these first-formed papulæ are ending in resolution, or desquamation, others are appearing successively on the trunk and extremities, where they become confluent, and form small patches. Lichen *urticatus* is a rare disease; I have never met with it except during the heats of spring and summer. In young children the strophulus *candidus* appears to correspond with this variety of lichen in adults.

6th. Lichen *lividus*. Under this title Willan has described a papular eruption of a dusky or livid colour, occurring principally on the extremities, and being unattended with febrile symptoms. It is apt to return after having disappeared, and may thus continue during an interval of several weeks. This variety of lichen is very uncommon. I have myself only seen two cases of it, both of which occurred in individuals whose constitutions had suffered from moral causes, as well as physical privations of every description.

7th. Under the head of Lichen *tropicus* have been included the whole of the varieties already enumerated, but developed under the influence of a tropical temperature. The papular disease engendered under tropical latitudes has been successively studied by Bontius, Cleghorn, Johnson, &c., whose several descriptions of the malady differ in no essential circumstance. In these countries, says Bontius, when the body has been covered with perspiration, an eruption of red and rough papulæ is apt to take place over the whole surface from the head to the feet, attended with a very troublesome pruritus. This disease attacks those persons more particularly who have recently arrived from colder climates; but no one is at all times exempt from liability to its invasion. When the skin is torn by the nails, excoriations frequently follow, which prove very rebellious to every form of treatment. The pruritus, according to the same author, is best alleviated by keeping the parts attacked covered with folds of linen dipped in water, mixed with vinegar or orange juice. This application at first causes acute pain, but this soon passes off, and the pruritus then becomes more endurable.

Cleghorn expresses himself nearly in similar terms: the cutaneous eruption entitled *prickly-heat* is so common in warm countries, that almost all suffer in a greater or less degree from it during the hotter seasons of the year. Children, however, seem more subject to it than the grown up and the aged. The eruption consists in an immense number of small round and red elevations which appear on different parts of the body, particularly after active exercise. Whilst



the eruption continues, the only inconvenience suffered arises from the pruritus attending it; but if it happens to be driven in by exposure to cold, by using the cold bath, or committing any imprudence in regard to diet, very serious symptoms may ensue. The moment that feelings of general uneasiness, pain in the head, excessive heat of the surface, &c., proclaim the recession of the lichen, blood-letting, and aperient and cooling acidulated diluents are to be had recourse to.

Dr. James Johnson was himself attacked with lichen tropicus. "The sensations," says he, "arising from prickly-heat are perfectly indescribable, being compounded of pricking, itching, tingling, and many other feelings, for which I have no appropriate appellation. It is usually but not invariably accompanied by an eruption of vivid red pimples, not larger in general than a pin's head. This eruption often disappears in a great measure when we are sitting quiet and the skin is cool; but no sooner do we use any exercise that brings out a perspiration, or swallow any warm stimulating fluid, such as tea, soup, or wine, than the pimples become elevated so as to be distinctly seen, and but too sensibly felt. Many a time I have been forced to spring from the table and abandon the repast I had scarcely touched, to writhe about in the open air; and often have I returned to the charge with no better success. The night affords no asylum. For some weeks after arriving in India I seldom could obtain more than an hour's sleep at one time, before I was compelled to quit my couch, and if there were any water at hand, to sluice it over me, for the purpose of allaying the inexpressible irritation."<sup>1</sup>

Hillary recommended that the evolution of the eruption should be favoured by the use of warm diluents, tea, coffee, &c. Dr. Johnson with greater reason sees no advantage in suffering from such a disease; and to prevent it entirely he advises Europeans arriving in India and warm climates to clothe themselves lightly, to avoid all exertion during the heat of the day, to live temperately, &c. In every instance in which this excellent author observed the recession of the lichen tropicus he could trace it to the occurrence of some other disease of greater or less importance.

629. The essential and distinguishing features of lichen are its red and inflamed papulæ; when other alterations are observed occurring at the same time as these papulæ, they constitute true complications. Thus, amidst the papulæ of the various species of lichen, and especially of lichen agrius, a number of small adventitious vesicles, are occasionally perceived, similar to those of scabies or eczema. The presence of these vesicles might even mislead in the establishment of a diagnosis, without attention to the circumstance of their appearance anteriorly to the evolution of the papulæ, and to their numerical amount, which is much inferior to that of the papulæ. Such vesicles must be regarded as a temporary complication, produced by the intensity of the papular inflammation of the skin. Lichen is occasionally observed to complicate scabies, when this disease attacks a young, plethoric, and robust individual. It happens more rarely that psoriasis appear and blend with the papulæ of lichen, in which case the diagnosis is attended with great difficulty. Incrustations of various thickness and extent speedily cover a part of the diseased surface, and may cause a truly lichenous eruption to be mistaken for an eczema impetiginodes; it frequently happens, indeed, that it is only after the disappearance of these adventitious inflammatory affections that the really papular character of the principal eruption can be clearly ascertained. I have also met with lichen complicated with ecthyma and furuncle.

Lichen is very rarely observed to be replaced by any other form of eruption.

After several relapses, or when lichen has continued long on any region, the skin always wears a dirty or grayish-yellow aspect, and becomes to a remarkable degree thickened and rough, so as to appear even scabrous.

630. Independently of the varieties which lichen presents, according as the papulæ which characterize it are scattered or arranged in clusters, are slightly or very much inflamed, are thinly sown or so thick as to be confluent, it presents several peculiarities according to the region of the body upon which it is evolved.

1st. Lichen of the face is common during summer among individuals whose features are habitually exposed to the burning rays of the sun.

The furfuraceous desquamation with which it terminates has been described by several French pathologists under the title of *dartre farineuse*. When lichen of the face becomes chronic, the skin of the nose, malar regions and chin, which is the usual seat of this eruption, becomes yellowish, dry, and furfuraceous. It is readily flushed by the influence of external warmth, spirituous liquors, the approach of the menstrual period in females, &c., and then assumes a coppery-red colour. This variety of the disease is extremely intractable, especially in women arrived at the critical age.

2d. Lichen of the extremities occurs particularly on their posterior and outer aspects, and in the bends of the arms and popliteal regions; the inner aspects of the legs and arms are often observed totally unaffected when the surfaces directly opposed to these are covered with papulæ. The arms and forearms of cooks, founders, smiths, &c., habitually exposed to high temperatures, are frequently attacked with lichen simplex, or an artificial papular eruption having the same characters.

3d. Lichen of the genital organs and margin of the anus is the most rebellious and insupportable of all the varieties of this eruption. It is frequently difficult to distinguish this eruption from eczema of the same parts when it has advanced into the furfuraceous state, or is attended with a sero-sanguinolent discharge as it frequently is § 353. Still a few papulæ may almost always be detected in the neighbourhood of the furfuraceous, red or excoriated surfaces when the case is one of lichen.

4th. Lichen very seldom attacks the hairy scalp primarily; but when the disease is evolved on the nucha, forehead or temples, it may spread to the neighbouring regions covered with hair. A violent pruritus and furfuraceous desquamation are then the principal characters of the disease.

631. Causes.—Lichen attacks individuals at every period of life. Children of a bilious habit, adults and individuals of a nervous and irritable temperament are particularly predisposed to it. Infants at the breast are often attacked during dentition with eruptions having the characters of lichen. The temperature of the atmosphere during spring and summer, has a very marked influence on the appearance of this eruption, which is observed to recur in some individuals regularly for several years during the hottest season. Lichen agrius most usually appears among individuals addicted to the use of spirituous liquors. Gastro-intestinal inflammations and the causes which produce them are occasionally observed to precede the appearance of the eruption.

632. Diagnosis.—It seems impossible to mistake even the most copious eruption of lichen simplex for the efflorescence of measles, scarlet fever and the other exanthemata. There is too marked a difference between the blotches or stains of these diseases and the elevated papulæ of lichen. Scabies and prurigo are the affections with which lichen simplex is most apt to be confounded. In prurigo, which like lichen is a papular disease, the papulæ are larger, flatter and nearer the natural colour of the skin—they are not red and flushed like the eruption of acute lichen; prurigo is attended with a burning pruritus, whilst the morbid sensations attending lichen are usually of a tingling and tickling description; in lichen, indeed, it is common enough for patients to make no complaint of pruritus except when the body has been exposed to heat, or the system has been stimulated by some imprudence in diet, particularly by the ingestion of some spirituous or fermented liquor. The distinguishing character of scabies is the vesicular form of its eruption; lichen, on the other hand, is papular in its origin and progress. The vesicles of scabies are almost always distinct, scattered over the inner aspects of the arms, forearms and wrists, between the fingers, and upon the front of the abdomen. The papulæ of lichen are generally agglomerated, and appear in preference on the outer and posterior aspects of the extremities. In some rare cases, the hands are the seat of lichen simplex; but these papulæ are then commonly clustered on their dorsal aspects, whilst the vesicles of scabies are principally observed between the fingers. The papulæ of lichen, especially when they are confluent, are surrounded by minute, thin and flimsy squamæ; the vesicles of scabies are never covered except by small scabs. Lorry, whilst speaking of lichen, under the title of papulæ, gave long ago the principal characters which distinguish it from scabies. He says: "The eruption of papular syphilis (lichen syphiliticus) resembles that of lichen urticatus in

<sup>1</sup> Influence of Tropical Climates, 3d edit., p. 17, 8vo. Lond., 1821.



point of size; but it is coppery in colour, is not the seat of incessant pruritus, and is accompanied with other symptoms of lues."

When patients labouring under lichen *agrius* tear the summits of the papulæ, there exudes a sero-sanguinolent fluid which dries up into small thin and adhering scabs; no true incrustation, however, is ever formed in lichen such as is observed covering the pustules of impetigo.

The characters of lichen *circumscriptus* are generally so well defined that it is next to impossible to confound this with any other papular or squamous eruption. And yet when the patches of lepra are coming to a close, when the skin has regained its natural condition in their centres, and their edges are divided into a multitude of minute red points, raised above the level of the integuments, they might be mistaken for the remains of lichen *circumscriptus*. But by carefully examining these points, whose shape is irregular, they will soon be seen to want the characters of papulæ.

The diagnosis of lichen *agrius* presents some difficulty when the eruption is so crowded that the individual papulæ cannot be perceived. On the margins of the patches, however, a certain number of papulæ may always be detected, which then proclaim the actual nature of the disease. The confluent and lacerated papulæ of lichen *agrius* might very readily be mistaken for the superficial excoriations consequent on an eczema, did not the few papulæ or vesicles that almost uniformly escape uninjured in the circumference of these excoriations reveal the kind of malady with which we have to do. The thickening of the skin that takes place in lichen *agrius* is another feature which by itself very commonly serves to distinguish this disease from any other with which it is at all likely to be confounded.

The small pustules of impetigo are occasionally clustered like the papulæ of lichen *agrius*; but in the lichen the scabs that occur are very thin and adherent, whilst in the impetigo they are thick and easily detached. Psoriasis has well-marked characters that distinguish it from lichen *agrius*. The successive desquamation that so particularly characterize psoriasis, happen along with a thickening of the corion, and especially of the cuticle, which is never observed to the same amount in lichen. Further, a number of papulæ are almost invariably found on the margins of lichenous patches even when the disease is of the most violent description, and has been most severely irritated.

The pustules of rosacea are inflamed at their base like the papulæ of lichen *agrius*, but they do not ulcerate; each of them contains a minute globule of pus, whilst the papulæ of lichen are solid, and discharge from their excoriated points a sero-purulent fluid which moistens their surface. The papulæ congregated on any region, whatever its extent, advance simultaneously, become confluent, and are attended with an irritation which extends to the corion, but rarely to the subcutaneous cellular membrane; in rosacea of any severity the irritation always extends to the cellular tissue, and there leaves enduring traces of its presence. Lichen *agrius* of the face frequently attacks the forehead, face, and lips; rosacea has its principal seat on the nose and cheeks. Rosacea is attended with a kind of tingling which becomes more marked and more troublesome after meals, on approaching a fire, and in warm places. The pruritus of lichen *agrius* of the face is more violent and seems more deeply seated; it occasionally becomes intolerable during the night and after the ingestion of any stimulating fluid. The discharge from the small acuminate pustules of rosacea often changes into thin scabs which are speedily detached; the excoriated papulæ of lichen *agrius* of the face also become covered with minute scabs, but they are thinner, broader and blend more generally with the furfuræ of the epidermis than those of rosacea.

653. *Prognosis*.—The continuance of simple lichens occasioned by the heats of summer varies from one to two or three weeks.

When lichen is the effect of causes unknown, or which have not acted directly upon the skin, it is generally difficult to speak with any degree of certainty with regard to the period of its probable termination. It is occasionally very obstinate, and may continue, whatever the disposition of the papulæ, for several months and even during several years. Lichen is in general the more troublesome and the less under the influence of remedial means, as it is of older date and has been characterized by successive eruptions occurring in individuals further advanced in years, and with more seriously shattered

constitutions. Lichen *agrius* of the face is commonly very rebellious and particularly apt to recur. I have scarcely seen more than two or three cases in which this papular inflammation appeared to be critical and salutary; to individuals otherwise in good health it is an insupportable affliction, rendering their lives truly miserable.

634. *Treatment*.—I could easily quote many cases of lichen *simplex*, and of lichen *circumscriptus* and lichen *urticatus* in which cures were accomplished by the sole effects of regimen,—by a regular and unexciting plan of life.

Whatever the form of lichen, whether the papulæ are widely scattered, or collected in clusters, if the disease be of recent date, acute in its character and of no great extent, a cooling regimen, slightly acidulated diluents and the use of the temperate bath, or of the cold river bath during summer, generally prove sufficient to make it disappear, and this without risk of ulterior ill effects. The tepid and hot bath frequently aggravate the symptoms of the eruption, particularly of the variety entitled *urticatus*.

When the disease has withstood this plan of treatment, recourse must next be had to the internal administration of the nitric, muriatic and especially of the sulphuric acid in large doses. These mineral acids, when they seem to engender any considerable degree of irritability of the digestive organs, must, however, be replaced by some of the less active vegetable acids such as the citric and acetic. As a final measure and when the papulæ are extremely numerous, agglomerated and confluent in various places, as they are in the lichen *agrius*, if the patient be young and of good constitution it may be necessary to detract blood once or oftener. General blood-letting is indeed an indispensable measure when the eruption is not confined to any determinate region of the body, such as the hand, face, &c. When blood is abstracted locally, the leeches employed must always be attached beyond the circle of the eruption; as without this precaution the irritation of their bites is apt to aggravate instead of relieving the local inflammation. All topical applications should be of the mildest description, and used cool or cold to the affected parts. Soothing washes, and gelatinous or mucilaginous baths, are generally useful when applied at low temperatures. Patients should, at the same time, be put upon the use of one of the acids which have been mentioned, combined as a sherbet, and should be advised to dress themselves with soft under garments and such clothing as will not tend to excite or increase the heat of the body.

The effects of these various means ought to be seconded by a regimen of greater or less severity according to the state of the constitution. Patients must at all events abstain from spiced food of every kind, spirituous liquors, in a word, from all that could possibly tend, by its stimulating qualities upon the stomach, to produce at a later period any thing like a determination to the skin.

635. When lichen consists of several successive eruptions, and has assumed the chronic character, if the constitution of patients appears to have suffered from age or any other cause, the practitioner should be careful to strengthen it as much as possible by the exhibition of tonics, and the recommendation of a suitable regimen, even before he thinks of attempting to treat the eruption.

When the disease is of very long standing, and affects the integuments deeply, the affected parts are often slightly anointed with the following ointment with the greatest advantage: R. Adipis suil. ʒi; Sulphur. sublim. ʒi; Potassæ subcarb. ʒss. Emollient temperate baths are to be used at the same time, and after some little interval has elapsed they may even be taken slightly alkaline. Under similar circumstances I have frequently prescribed either of the following unguents with excellent effects: R. Adipis suil. ʒi; Colomelan. ʒi; Camphoræ gr. xviii; R. Adipis suil. ʒi; Hydrarg. deuto-ioduret gr. x. M. I have also occasionally succeeded in giving relief from the pruritus by cauterizing the affected parts of the skin very slightly with nitrate of silver, or by the use of vinegar and water as a lotion.

The vapour bath, very detrimental in acute lichen, becomes extremely beneficial in the chronic state of the disease, especially when the surface of the skin feels very dry. I have treated a great many cases of these eruptions by the combined use of the vapour bath, and the internal exhibition of the muriatic acid sherbet.

Sulphureous baths, so generally and indiscriminately recommended in the treatment of cutaneous affections, are constantly hurtful in acute



lichen, and very seldom serviceable in the chronic form of the disease. These baths may even cause a lichenous eruption; it is by no means an unfrequent circumstance to see lichen *agrius* appearing among individuals under treatment for scabies by means of sulphureous water bathing. Nevertheless, I have obtained the cure of several cases of obstinate *hereditary* lichen, apt to return at frequent intervals, by effecting a material modification of the constitution by the use of artificial sulphureous water baths prolonged during several hours every day. Results of a similar description have been observed from the natural baths of Louesche and Schinznach.

In lichen *agrius* advanced to the state of excoriation, the *mineral acids* ought constantly to be prescribed, unless, indeed, the irritable state of the digestive organs seems to contra-indicate their use. They should be taken in doses of from half a drachm to two scruples a day, in a pint of water sweetened to the taste. They cause a diminution in the watery secretion poured out by the torn papulæ, and appease the pruritus.

A certain number of cures have also been obtained by the exhibition of *saline purgatives* frequently repeated, or of four or five grains of calomel combined with eight or ten of rhubarb, or the same quantity of jalap; to me, however, the mineral acids have generally appeared more efficient as therapeutic agents in this class of complaints.

When *chronic* lichen has withstood these various plans of treatment in an individual otherwise in good health, exempt from visceral affections, &c., when the disease is hereditary, is dispersed over a large surface of the body, and occasions distressing insomnia, we must then have recourse to some of the preparations of *arsenic*, and continue this class of medicines for a long time in graduated doses, it being always understood that they shall produce no manifestly injurious effects on the constitution. I have succeeded in removing several *circumscribed lichens* of old standing by the internal use of the solution of the arseniate of soda, and of sulphurated alkaline inunctions. These remedies, however, it must be presumed, are only to be employed in the small number of cases in which all other means have been fruitlessly enforced, and the disease has attained such severity that patients, worn out and reduced to despair, insist on getting rid of their infirmity at all hazards. It is further necessary, before prescribing these active medicines, to inquire particularly into the state of the digestive organs, only to increase the doses very gradually, and above all not to exceed from fifteen to twenty drops daily of Fowler's, or a drachm of Pearson's arsenical solution for an adult, in some mucilaginous fluid. Should such old and obstinate eruptions decline at all in severity and become endurable, it is often prudent not to expose patients to the evils that may result from the use of arsenical preparations. It is very necessary to be on our guard against any determination, speedily and at all risks to subdue these inveterate affections of the skin. When they have appeared before the age of puberty, they may get well of themselves a few months or a few years later, or at all events with the assistance of medicines less dangerous in their action. In adults, too, and individuals of riper years, an appropriate regimen pursued during several months frequently renders a cure easy which had formerly appeared impossible even under the influence of the most active medicinal means.

#### History and particular Cases.

636. Hippocrates classes the lichens with prurigo, psoriasis, and lepra, without specifying the particular characters of each.<sup>1</sup> According to De Gorter<sup>2</sup>—"In hoc loco Hippocrates per *lichenas* intelligit talem cutis fœdationem, in quâ summa cutis *pustulis siccis* prurientibus exasperatur." By *dry pustules* De Gorter himself evidently understands *papulæ*. Celsus appears to have referred to lichen in his description of *papulæ*,<sup>3</sup> and Lorry in very recent times has treated of this disease under the same title. The Latin translators of the Greek writers have erroneously rendered the word *lichen* by *impetigo*, Celsus having already used the Latin term in another acceptation, which is adopted at the present day to signify a pustular inflammation. It is not unimportant to observe in this place that F. Platerus has

spoken of lichen under the name of *scabies sicca*. "Scabies sicca seu scabrities, quæ pustulis siccis e quibus nec sanies nec pus emanat, se prodit cutemque asperam reddit et crosam cum pruritu plus minusve molesto."<sup>4</sup> Others have mentioned the disease under the title of *scabies agria*. Willan and Bateman were the first who gave an excellent description of lichen. Several of Alibert's observations relative to his *dartre furfuracée volante* appear to assimilate themselves to the lichen; he has, however, recently described the disease under the name of *prurigo lichenoides ou furfurant*. Bertrand Lagresie has detailed a case of it under the very objectionable title of *dartre miliaire*.

Bontius,<sup>5</sup> Cleghorn,<sup>6</sup> and Dr. James Johnson<sup>7</sup> have severally studied the disease as it occurs within the tropics.

I shall now give a few cases of the principal varieties of lichen; others may be found by referring to the Journal Hebdomadaire, t. vii. pp. 436, 459, the Revue Médicale, Juin 1830, p. 541, and the Lancette Française, 1831, t. v. p. 581, &c.

CASE XCVII.—*Lichen simplex of the face*. Max. Degr., mason, seventeen years of age, came into the Hôpital Beaujon, on the 11th of September, on account of a coryza, a slight bronchial affection, and a lichenous eruption of the face. For four or five days the patient had complained of intense pruritus of the face, the skin of which had in several places become rough and uneven, and it was easy to perceive that the lower part of the countenance was beset with numbers of small red and *solid* elevations. The greater number of these were acuminated, others were semi-globular. The recent papulæ were principally situated on the chin. In one place they were disseminated, in another collected into clusters; many were visible which the patient had deprived of their heads with his nails. The great majority presented a small brown scab which might have been covered with the head of a pin; several were already free from this incrustation, which was succeeded by a small red point. The parts of the integument upon which these alterations appeared were covered with furfuræ, and beset with small untouched papulæ. This mixture of papulæ intact, and of papulæ lacerated, or in a state of desquamation, was particularly remarkable upon the cheek and about the commissures of the lips; on the upper lip the papulæ were shrunk and replaced by a furfuraceous desquamation. Neither with the naked eye nor with the assistance of a magnifier could either pus or serum be detected in any of the entire papulæ.

No other region of the body presented any trace of a similar eruption. Under the sole influence of the antiphlogistic regimen, the use of the cool bath and of diluents, the papular inflammation of the face, coryza and slight bronchitis with which it was complicated, had completely disappeared by the 22d of September, 1826.

CASE XCIX.—*Lichen of the trunk and extremities*. M. Rousset was admitted a patient at the fourth dispensary on the 19th of August, 1822. The papular inflammation under which the patient laboured had appeared towards the end of June of the same year, by a number of small pruriginous elevations upon the right thigh. The eruption spread on the following days to the opposite side of the loins and thorax. For some time Rousset gave little heed to this affection, but it at length became so troublesome, and was attended with such violent pruritus, that in his own words, "he would gladly have stripped off his skin to be rid of it." This state was unaccompanied with fever, or any derangement of the principal organs.

A very great number of minute red, acuminated, solid elevations containing no fluid, were conspicuous on both the upper and lower extremities, and scattered over the trunk. The fingers passed over the surfaces of the skin that were thus affected, distinguished inequalities similar to those of shagreen. The papulæ, crowded together and disposed in irregular clusters on the forearms, were disseminated over the arms; on the anterior part of the chest, the eruption, confluent in some places, formed in others broad red papular patches, separated from each other by intervals of healthy skin. These clustered patches, where the papulæ were confluent, were the

<sup>4</sup> Præcox, t. ii. p. 674.

<sup>5</sup> De Medicinâ Indorum, cap. xviii.

<sup>6</sup> On the Diseases of Minorca, chap. iv.

<sup>7</sup> On the Influence of Tropical Climates on European Constitutions, 8vo. London, 4th ed., 1824.

<sup>1</sup> Prorrh. ii. p. 95. Ed. Foes, an. 1595.—Περί Πασχων, p. 85.

<sup>2</sup> Medicina Hippocratica, aph. xx. lib. 3.

<sup>3</sup> De Medicinâ, lib. v. cap. 28.



points in which the patient complained of the pruritus as most intolerable. Here and there, between the inflamed papulæ, small surfaces were remarked upon which a furfuraceous desquamation was going on; traces of scratches and a number of small black scabs that might have been covered with the head of a pin, and corresponded to the heads of papulæ the apices of which had been removed with the nails, were also observed in different situations. (*Barley water with honey; V. S. B. ad 3xii; vegetable diet.*) The effects of this treatment were very remarkable. On the 22d of August, however, there still remained a great number of papulæ upon the skin, but the pruritus was very supportable—(*same drink and diet; warm bath.*) The warm bath was taken twice, and followed each time with a fresh eruption of papulæ. The pruritus was increased during the day by exposure to heat and exercise. On the 24th of August he was again bled from the arm to the same extent as before: next day the papulæ most recently evolved were shrunk; in other places the affected skin was covered with a furfuraceous desquamation, and the freshest papulæ within a short time became affected with the exfoliation. On the 10th of September the patient had recovered completely.

CASE C.—*Lichen; blood-letting and diluents; cure.* Regnault, a dyer, 25 years of age, in the habitual enjoyment of good health, consulted me on the 26th of August, 1822, on account of an eruption which had made its appearance, under the form of numerous small red and solid elevations, on the forehead, arms, and breast, between the 12th and 14th of the month. The parts affected were extremely itchy, and the sensation was much exasperated by exposure to the heat of a fire. Where the eruption was very close, as upon the forehead, the skin had a punctuated appearance, and the finger passed over it, detected numerous irregularities occasioned by the prominence of the individual papulæ. On the forearms and wrists the eruption occurred in irregular clusters of various sizes, which felt like pieces of fish-skin. A certain number of the papulæ composing the whole of these groups were shriveled and succeeded by a furfuraceous desquamation; these patches, indeed, formed true papular rings, in the centre of which the skin looked mealy and somewhat yellowish in colour. The papulæ in the neighbourhood, and those generally that were most remote from the centre, were of a vivid red. The heat of the skin was not essentially increased, and the functions of the whole of the principal organs were performed with perfect regularity. The patient was put upon a course of diluents, and was bled twice. Within a fortnight he had recovered completely.

CASE CI.—*Lichen circumscriptus. Gelatinous baths and purgatives.* Madeleine J. D. Fleury, 18 years of age, of a nervous temperament, was presented to me on the 5th of March, 1826, for my advice on account of lichen circumscriptus. The disease had commenced in February, 1825, by a cluster of elevations on the left leg, and since this epoch others had appeared on almost the whole surface of the body. Various remedies had been fruitlessly tried for this eruption. The application of an ointment of red-precipitate had increased it greatly. A blister had been applied to the arm and kept open for five months. On the 15th of March, 1826, the following appearances were distinguished:—

1st. Over the face, and especially the forehead, cheeks and ears, broad mealy-looking spots or patches, on the surface of which several papulæ were apparent. No affection could be discovered of any part of the hairy scalp.

2d. On the body, and particularly on the nipples, several clusters of papulæ of an oval or irregular shape, the centres of which were in a state of desquamation. On the back several other clusters of various sizes, composed of papulæ, some of which were red and inflamed, and others, probably of old standing, presented a slight yellow tinge.

3d. On the upper extremities, and particularly on the outer and posterior parts of the forearms, several papular clusters an inch and a half in diameter were distinguished, whose centres were desquamating. The papulæ nearest the centre were yellowish, those more remote were red and inflamed. On the print of a blister, several very distinct papular elevations were very conspicuous.

4th. On the lower limbs traces of a similar papular eruption were not less apparent. Some of the groups were here fading, of a yellowish or brownish hue, and covered with furfuræ; others were fiery, their primary form being still very distinct.

Although the papulæ in general did not appear very violently inflamed, the eruption was attended with very troublesome pruritus, particularly when the heat of the surface was increased by exercise or the warmth of a bed. The skin was rough and dry on the parts affected. Twenty-five gelatinous baths, and a purge administered every fifth day, had a singular influence in diminishing the eruption. Several fresh clusters of papulæ, nevertheless, made their appearance on the trunk and extremities; but twenty more of the gelatinous baths being taken, the skin presented no further trace of eruption.

CASE CII.—*Lichen of the bends of the arms and hams. Inunction of an alkaline sulphur ointment.* N \* \* \*, six years of age, had laboured from her birth, under a lichen agrius. In other respects the child was in apparent good health. On the 14th of June, 1814, this patient presented the following morbid appearances:—the skin of the face, except that of the chin and lips, was healthy. The latter parts were not swollen, but their integument was dry, rough and mealy, and here and there presented slight superficial chaps, a few papulæ, scarcely inflamed, and some, the summits of which had been torn off, and were now covered with small dark-coloured incrustations. On the upper extremities the papulæ were confluent and clustered; at the bends of the arms the skin was red and inflamed, and surmounted by a number of papulæ in different states, entire, or torn on the tops. Several small chaps and scratches were also visible, and different points were affected with furfuraceous desquamation. On the legs an eruption of papulæ, altogether analogous, was evident, scattered over the outer and back parts of the thighs, agglomerated in the hams, where the skin was red and dry, and chapped and torn with the nails in different places. The child complained of violent pruritus, and during the night tore herself with her nails. I prescribed the gelatinous bath and citric acid sherbet, which were continued for a month, without any other effect than some diminution of the itching and of the redness of the skin in the folds of the arms and popliteal regions; for as one crop of papulæ terminated in a furfuraceous desquamation, others were evolved. I now determined to try stimulus of another kind to the skin than that to which it had been so long accustomed. The affected parts were rubbed daily with an alkaline sulphur ointment. These frictions which were continued for about ten minutes, were not attended at the time with any unpleasant sensation; but in about a quarter of an hour afterwards, the little patient complained of rather a violent sense of scalding in the parts to which the ointment had been applied. This ointment had not been used above eight or ten times before a general redness of the skin replaced the papular clusters. This excitement disappeared in the course of twenty-five days, and the skin of the bends of the arms resumed its natural appearance. The eruption proved more obstinate in the hams; but it yielded there eventually, and by the 15th of Sept., 1824, the patient was quite well.

CASE CIII.—*Lichen of the genital organs, &c. Blood-letting, whey, and vinegar washes.*—N. Martin, an omnibus driver, aged forty-eight, drinking wine and spirits freely, but not to the extent of intoxication. Within ten years he had contracted the itch thrice.

On his admission into the Hôpital de la Charité, on the 23d of November, 1833, he had already laboured, for a fortnight, under a lichenous eruption which spread over the genital organs, and upper and inner parts of the thighs, extending back all the way along the cleft that separates them. Over-indulgence in spirituous liquors had some time previously produced congestion towards the head, for which the patient had been let blood three different times, at short intervals. A more sober life had recently prevented the recurrence of this symptom, when a sensation of heat and itchiness began to be felt around the anus; it was of no intensity at first, but increased so much within a few days that the patient felt compelled to endeavour to relieve himself by frequent scratching. The eruption soon spread to the penis and scrotum, and the pruritus was now so violent that the patient was glad by tearing himself with his nails to replace this sensation by a more endurable one of painful smarting. Lotions with a solution of the super-acetate of lead did no good. The slightest freedom in regimen rendered the pruritus insupportable. The patient at length was entirely deprived of sleep; the heat of the bed increased his misery to such a degree that he lay without covering of any description. The surface of the diseased skin has always been dry, of an intense red colour, furrowed by traces of the nails, hotter than



the neighbouring parts, and shining in the centre of the clusters. The extent of the disease is indicated by a kind of raised edge, rough to the touch, and composed of coherent and not very distinct papulæ. The penis and scrotum are uniformly red. No traces of any functional disturbance could be detected. (*V. S. B. ad 3xii; two measures of nitric acid sherbet; fomentations with cool decoction of althea; temperate bath; milk and vegetables for diet.*)

Nov. 24th.—The patient was sensibly better, the pruritus less urgent; but he had slept very little. The blood abstracted presented a thin buffy coat; the coagulum, however, was very much contracted. The treatment indicated was continued till the 28th, and the affected parts were twice anointed with lard. The patient feeling himself worse was bled again on the 29th. This measure gave relief, but only for a few hours; this time the blood was not buffed. On the 30th, vinegar washes were resorted to with a view to allay the itching. The application of compresses dipped in this wash was found immediately to moderate the pruritus; it was necessary, however, to renew them frequently, and the colder they were the patient felt the greater relief. Dec. 6th.—The redness of the skin was greater, and a kind of smarting sensation had succeeded to the violent pruritus. The lotions were now discontinued. Dec. 7th.—The temperate water-baths were replaced by those of watery vapour, and these were repeated constantly till the 11th, when, as they seemed to excite the patient too much, the skin acquiring a purple red colour, they were discontinued, and the simple water-bath recommenced; the nitric acid drink was carried the length of three pints daily. Dec. 18th.—The pruritus now was not incessant; the patient slept through a considerable part of the night; the red colour of the skin had faded, and the boundary of the parts immediately affected was less conspicuous: whey was substituted for the nitric acid drink on the 22d. He also took a small quantity of magnesia, his bowels being slightly constipated. On the 27th, Martin was bled for the third time, and with great relief to all the symptoms; the disease, indeed, now got rapidly well. The baths were continued, the vinegar wash renewed without injury, the diseased skin in various places began to assume its natural colour, and the limits between the healthy and affected surfaces were no longer visible along the upper parts of the thighs; the itching also became slight and transient. In getting well the eruption followed a course the reverse of that of its development, disappearing first from those places that had last become affected. During the fifty-three days he was under treatment, the patient took forty-six simple and six vapour baths. The nitric acid drink was continued for twenty-nine days, to the extent at least of three pints daily; it was then replaced by the whey which seemed to produce better effects. The venesections, especially the last, were beneficial; the application of the hog's lard was of no service, the vapour bath proved evidently too stimulating; lastly, the vinegar lotions gave great relief.

## STROPHULUS.

Vocab. Tooth-rash, *Strophulus*, Gum [*Red-gum*].

637. *Strophulus* is a cutaneous eruption which frequently occurs in children at the breast, characterized by red or white itchy papulæ of various sizes, evolved in succession, most commonly on the face and lower limbs, occasionally vanishing and recurring in an intermittent manner, and ending in resolution or furfuraceous desquamation.

638. *Causes*.—*Strophulus* commonly makes its appearance during the earlier months of infancy, and also in the course of cutting the first set of teeth. The disease seems occasionally to be traceable to the irritation of rough woolen clothing, the exposure of the body to too great a degree of warmth, and want of due attention to cleanliness. In the majority of cases, however, *strophulus* is evidently either preceded or accompanied by some gastro-intestinal disturbance, induced by cramming the child with too great a quantity of food, or with food of improper quality, to the irritation of teething, &c.

639. *Symptoms*.—The papulæ of *strophulus*, in their dimensions, colour, number and arrangement, present various shades of difference, from which the eruption acquires a considerable diversity of appear-

ance in different cases. These have been indicated by Willan by particular titles.

1st. The papulæ are sometimes of a vivid red, prominent, scattered over the cheeks, forearms, and dorsal aspect of the hands, and intermingled with erythematous patches of varying extent—*strophulus intertinctus* [red-gum]. These papulæ and red patches occasionally continue for several days, without the health of the infant appearing to suffer in any way; they occasionally vanish in the morning to reappear in the evening. Lastly, when the eruption is permanent, it begins to fade within a week or two, when the surface of the parts affected looks of a pale yellow colour, and becomes covered with a furfuraceous desquamation.

2d. Sometimes, on the contrary, the papulæ are small and white—*strophulus albidus* of Willan—and now and then appear surrounded by a slight blush; they then most usually occur on the face, neck, and breast, and are in general more prominent than those of the preceding variety.

3d. Lastly, the white papulæ of *strophulus* may appear with larger dimensions than those that have just been mentioned, and without any surrounding redness of their base—*strophulus candidus*, Willan. Their surface is smooth, shining, and of a duller white than the skin in their vicinity. These large papulæ are commonly scattered at great distance from one another over the loins, shoulders, and upper parts of the arms.

640. Besides these differences in point of size and colour, the papulæ of *strophulus* present yet two particular dispositions:

1st. The eruption may be very thick upon the face, trunk and extremities—*strophulus confertus*, Willan. On the face, the papulæ in this variety are smaller and more confluent than in the *strophulus intertinctus*; their colour is not so bright, and they are more generally prominent; they end within a week or two in a furfuraceous desquamation. On the trunk the eruption appears especially on the back and loins; there the papulæ are larger and less closely crowded together than on the face. If they be punctured deeply with a needle, a globule of transparent serous fluid may occasionally be squeezed out of them; this fluid is not deposited under the epidermis as in the vesicular eruptions, and is re-absorbed during the progress of the disease. On the upper extremities, as also on the neck and shoulders, the papulæ usually form irregular clusters; they end in a furfuraceous desquamation, and the skin in the affected parts continues for some time of a yellowish-gray colour. The papulæ evolved on the lower extremities always give rise to pruritus of a very violent description. They appear especially upon the calves of the legs, the thighs, buttocks and loins, in successive eruptions, which occasionally recur during several months.

2d. The papulæ of *strophulus*, finally, may appear on different regions of the skin in small circular clusters—*strophulus volaticus*, Willan. In each of these groups the number of papulæ usually varies from six to ten; they, as well as the interstices, are of a vivid red. After continuing four or five days, they begin to shrivel, grow sallow-looking, and finally end in a furfuraceous desquamation. The groups appear in succession on the face, trunk, and extremities. The eruption, which is very similar to the lichen *circumscriptus* of adults, may continue for several weeks.

641. These varieties of *strophulus* are often observed affecting the same child at one time. The white papulæ of the *strophulus albidus* are frequently seen mingled with the red papulæ of *strophulus intertinctus*; lastly, the papulæ may be crowded and confluent in several places, constituting *strophulus confertus*, whilst in others the voluminous and thinly scattered elevations of *strophulus candidus* are observed to prevail.

642. Whatever the form assumed by the eruption, *strophulus* is always accompanied with severe itching, a symptom which, as it is increased by the warmth of bed, is frequently productive of insomnia. Various symptoms produced by gastro-intestinal irritation, or the process of teething, are frequently associated with those characteristic of *strophulus*.

643. *Diagnosis*.—The papulæ of *strophulus* are always either whiter or redder than the healthy skin that surrounds them; those of prurigo, when they are intact, are nearly of the same colour as the integuments. Further, each of the successive eruptions of which



strophulus consists, has the course of an acute disease; prurigo approaches chronic disorders more nearly in its characters.

It is difficult, on the other hand, to establish satisfactory distinctions between strophulus and acute lichen. The shades of difference observed in these two diseases are ascribable to the differences in the age of the individual affected. The papulæ of acute lichen may, in fact, have the red colour, and appear either scattered or collected into groups, like those of strophulus. The latter malady, however, is more frequently marked by periodical intermissions and exacerbations, and is more intimately connected with the process of dentition than lichen. Further, the pale grayish-yellow tint that occasionally succeeds the disappearance of the papulæ of strophulus, is not nearly of such long continuance as that regularly observed to follow lichen, in which, indeed, the colour is often of the most decided coppery-yellow. To conclude, strophulus is never seen terminating by excoriations similar to those that follow lichen *agrius*.

*Strophulus confertus* is distinguished from *papular erythema* by the greater size of the patches in the latter, and their being attended with but little pruritus.

644. *Prognosis*.—Strophulus in itself is a disease of no gravity. When it appears associated with gastro-intestinal inflammatory affections, it is to these that the attention is to be particularly directed. These two diseases frequently alternate during the whole progress of the process of dentition, and the functional disturbance of the alimentary organs is often seen to abate with the evolution of the papulæ of strophulus.

The papulæ of strophulus vary in the period of their duration, from one of a few hours to one of several days; that of the eruption may extend over several weeks, according as the action of the causes which have produced it is intermittent and transient, or permanent.

645. *Treatment*.—When strophulus, in an infant otherwise healthy, appears to have been evolved under the influence of causes acting directly on the skin, the first indication naturally is to remove these or make them unavailing.

The pruritus may be appeased for an instant by dabbing the papulæ with cold salt and water, or vinegar and water. But when strophulus is symptomatic of inflammation of the digestive organs, or exists at the same time with such a disease, it is of primary importance to endeavour to subdue this internal affection by dietetic means adapted to the state of the digestive organs, by giving up all food save such as is supplied by the mother or nurse, and even by substituting sugar water in part for this, when febrile symptoms make their appearance; lastly, in diminishing the irritation of the external surface by the daily administration of baths of the decoction of bran or althea root, at a moderate temperature.

646. The cold bath lessens materially, and occasionally even cuts short almost at once, the papular inflammation of strophulus; but it is apt to increase the phlegmasiæ of the digestive organs which so frequently complicate the disease when it occurs during the process of teething.

Purgatives employed under similar circumstances are most generally detrimental. They occasionally produce vomiting and obstinate diarrhœa. It is also well as a general rule to abstain from the emetics and tonics recommended in strophulus by Willan, on account of the gastro-intestinal affections that so commonly occur along with the disease, and in which medicines of the classes mentioned are rarely admissible. (a)

#### *Historical Notices and particular Cases.*

647. Strophulus is even better known to mothers and nurses than to the physician. Those authors who have treated particularly of the diseases of infancy, have only spoken generally and vaguely of the eruption, under the name of *tooth-rash*, *red-gum*, &c., frequently showing, by the names adopted, that it was held especially to depend on the irritation of teething, or on some affection of the alimentary canal.

(a) The objection to purgatives in strophulus can only apply to those of an irritating nature; laxatives, such as rhubarb and magnesia, epsom salts in small doses, and castor oil will be generally found serviceable.

Lorry<sup>1</sup> regarded strophulus as a variety of lichen. Russel<sup>2</sup> evidently indicated the strophulus *intertinctus* under the title of *red-gum*. Sauvages<sup>3</sup> describes another variety—the strophulus *volaticus*, under the name of *feu volage*. Willan<sup>4</sup> was the first who gave a truly good description of the disease. (a)

The different appearances which strophulus may assume in a particular case, are readily assimilated to one or other of the varieties of the disease described by Willan. The following case will prove that if it be important to study the whole of the various forms assumed by this eruption, in order to render the account of it more complete and striking, it is of no less importance to avoid isolating them too much from each other, seeing that each may show itself in succession one after another in the same child during an interval of time more or less considerable.

CASE CIV. *Various forms of strophulus*.—A lady two months after her confinement, having been exposed to great fatigue of body and much anxiety of mind, seemed to lose the quality of excellent nurse, which she had hitherto proved herself; her child became restless during the night, crying incessantly, &c., and soon showed symptoms of gastro-intestinal derangement, combined with a papular eruption of strophulus upon the skin. This two-fold inflammation was treated by the daily use of the temperate bath; the mother also took a few temperate baths; her usual diet was not altered, this being habitually very regular, and she soon regained her strength; the child too thrived once more, but the strophulus continued for between four and five months, disappearing and recurring at uncertain intervals; now in the shape of red and inflamed papulæ upon the face and arms (strophulus *confertus* or strophulus *intertinctus*), and again under that of white and prominent papulæ (strophulus *albidus* and strophulus *candidus*), which were usually evolved upon the loins, buttocks and thighs. This papular inflammation was habitually increased during the night. The pruritus frequently awoke and prevented the child from sleeping. The application of cold water or a little saliva to the papulæ always seemed to appease the itchiness. For a long time the child had nothing but its mother's milk, upon which it thrived again. The symptoms of the gastro-intestinal inflammation disappeared with those of the affection of the skin. At the period of teething, the strophulus recurred afresh, but without any marked derangement of the digestive organs. At the age of two years the infant became affected with laryngitis, and six months later with bronchitis, from both of which attacks, actively treated by the application of leeches, it recovered completely.

#### PRURIGO.

Vocab. *Cnesmos, Prurigo, Pruritus, Scabies Papuliformis.*

648. Prurigo is characterized by an eruption of papulæ, nearly of the same colour as the skin, and accompanied with pruritus of the most intense description. The papulæ, larger than those of lichen, after having been torn by the nails, are usually replaced by small black and circular scabs; it happens more rarely that in decaying naturally they leave minute yellowish stains behind them upon the skin.

649. Prurigo is usually evolved either at once or successively upon several regions of the body; it is very seldom, indeed, that it attacks no more than one.

650. Prurigo presents three principal varieties:

1st. The eruption in one case is proclaimed by a troublesome feeling of itchiness over the shoulders, upper part of the breast, lumbar region, outer surfaces of the arms and thighs, &c. When the parts so affected are examined with care, numbers of papulæ are perceived, soft to the touch, and broader than those of lichen, from which they

(a) See also Underwood. Am. edition, p. 121.

<sup>1</sup> Ita multi sunt infantes quibus ad singulas dentitionis periodos irritatio lichenes exterioris protrudit. (Lorry. De morb. Cutan., p. 245.)

<sup>2</sup> Russel. Econom. natur. in morb. Gland., p. 42.

<sup>3</sup> Nosol. meth., tom. i. p. 139.

<sup>4</sup> Willan. Art. Strophulus.



also differ in preserving the natural colour of the skin, the greater number, indeed, only show symptoms of inflammation under the influence of external irritation. These papulæ are attended with no prickling sensations, but simply with a violent and incessant sense of itchiness. They occasionally project in so slight a degree, that they appear to be situated rather in the substance than on the surface of the skin. In this form of the disease, the pruritus is more especially complained of by patients when they first lie down, or after they have been in bed some time; it is then so violent as completely to rob them of all chance of repose. The itching may also be excited or exasperated by the contact or friction of the clothes, and by any cause that tends to heat the body, such as meals, exercise, &c. The pruritus intermits occasionally for three or four hours at a time, and now and then is scarcely felt when the patient's attention is very deeply engaged. This variety is entitled *prurigo mitis* by Willan.

Small, thin, circular incrustations, the size of a pin's head, and of a brownish or black colour, which often look wrinkled in the circumference, are always to be seen between the pruriginous papulæ. These minute scabs, which are detached before long, are formed by the drying up of a little blood that has exuded from the summits of the papulæ lacerated by the nails. A number of scratches, the cause of which is evident, and of stains of a brownish-yellow colour, due to the fading of papulæ, may also almost invariably be distinguished. The papulæ in *prurigo mitis* are successively evolved; and the disease, unless attacked by appropriate treatment, may continue for several months.

2d. Prurigo in another instance presents itself with a character of greater severity and obstinacy, when it has been distinguished by the epithet *formicans* by Willan. The papulæ, in this variety, broader and less apparent than in *prurigo mitis*, are attended by an incessant and insupportable pruritus, which is generally remarked to be intense in the same proportion as they appear flatter. They are usually scattered over the entire surface of the body, the face, the feet and the palms of the hands excepted; but they are especially numerous upon the nape of the neck, the lumbar region and outer parts of the thighs. In the evening, and particularly towards three or four o'clock in the morning, the pruritus is increased, and the patient, if he has been asleep, is then promptly awakened. The hands are involuntarily carried to the parts covered with papulæ, and a multitude of distressing sensations are then superadded to the one of pruritus. Some patients feel as if a host of insects were burrowing under the skin, others as if they were devoured by pismires, a circumstance which the epithet of Willan, *formicans*, is intended to recall. Others again feel as if the skin were pierced with red-hot needles. Patients then scratch themselves as if under the influence of rage or despair, and never cease from tearing their skin with their nails, brushes, combs, or any thing they can lay their hands on. The feeling of pruritus, increasing continually, is attended with an impatience and hurry of manner difficult to describe. The patients leap out of bed to walk about quite naked; the muscles of the upper and lower extremities seem in a state of constant and universal contraction, feel hard, and show distinctly and strongly through the skin; when the patients attempt to describe their sufferings, the phrases they make use of are *heat of blood, burning fires, maddening itchiness, &c. &c.*

The apices, and indeed the whole of the papulæ, are before long torn off by the nails. The skin appears covered with small, thin, and black-looking crusts, as in *prurigo mitis*. These incrustations are much more distinct than the papulæ that remain intact; these, having the colour of the integuments generally, are often distinguished with difficulty, on account of their trifling size.

3d. The papular eruption of porrigo is usually more considerable, and attended with severer symptoms among the aged than any other class of patients; hence Willan has established a third variety of the disease, under the title of *prurigo senilis*. The skin consequently appears more rudely scratched in this form of the disease than in the former two; it is also affected with a more copious desquamation. The pruritus is even more unbearable and incessant than in the *prurigo formicans* of children or adults, the external characters of the eruption, however, being precisely the same.

651. The intensity and continuance of the pruritus do not always bear an exact relation to the numbers of papulæ; I have occasionally

seen this symptom excessive, when but a very small number of papillæ could be distinguished on the skin.

Besides the papulæ which characterize prurigo, other and accidental lesions are generally observed, which disappear as soon as the irritation, which has caused them, ceases. Thus, when individuals attacked with prurigo neglect proper attention to cleanliness, pustules, vesicles and furuncles arise amid the papillæ; the skin also presents chaps of greater or less extent, and occasionally acquires a considerable degree of thickness, when the disease is of long standing, especially among the aged, or a furfuraceous desquamation takes place here and there from the trunk and extremities.

Scabies and impetigo may accidentally complicate prurigo; but it is a mistake to suppose with Willan and Bateman, that they may appear as one of the terminations of this disease. Several pathologists have maintained, that the state of the skin in *prurigo senilis* was favourable to the production and propagation of pediculi. (Vide Vocab. sub. *pediculi*.) And Willan even supposed that he had discovered a peculiar insect in one case of the disease; his description, however, of this insect is very imperfect.

Independently of these affections of the skin, *general* prurigo may be complicated with constitutional symptoms. In *prurigo formicans* the eruption of the papulæ is occasionally preceded by headache, general uneasiness, pain at the pit of the stomach, &c. On the other hand, when individuals affected with prurigo are attacked with any acute disease, the papular eruption declines and sometimes even disappears entirely, to recur when convalescence is established.

652. Prurigo may continue a few weeks only, or it may last for several years. During the longer period, very evident remissions and exacerbations are commonly observed. Among women and children, whose skins are fine and delicate, prurigo frequently disappears without leaving any trace of its existence behind it; but when it has affected the thick and dry integument of the aged, the epidermis is continually thrown off under the form of a mealy powder in the vicinity of the papulæ, and the skin presents stains or spots of a yellowish-brown colour intermingled with scratches.

653. The verge of the anus and scrotum in men, and the labia majora in women, are not only occasionally attacked with lichen and eczema, diseases essentially pruriginous, but these parts may be the seat of distinct papular eruptions belonging to prurigo. Such local varieties of prurigo, however, occur much more rarely than is generally imagined; true lichens, and chronic eczema, accompanied with excessive pruritus, have very often been referred to under the title of prurigo.

1st. Prurigo *podicis* is characterized by true papulæ similar to those of prurigo *formicans*. The skin of the verge of the anus and inner parts of the thighs, and buttocks, is rough, uneven, and beset with papulæ of the same colour as the integument that surrounds them, and with a greater number of small blackish scabs, which cover the summit of the papulæ that have been lacerated. These papulæ may be fortuitously mingled with a number of vesicles or small pustules. The itching occasioned by prurigo *podicis* is unbearable, especially during the night. Patients do not often forget themselves in sleep until they have scratched themselves with a kind of fury. This local variety of prurigo is always a long and obstinate disease. After continuing for some months, the symptoms occasionally seem to remit, but they become more violent than ever before long, from some irregularity in diet, &c. Women arrived at the critical period of life are particularly subject to this species of prurigo, and to lichens of the same parts. When the prurigo has been long left to itself, the skin, in a state of incessant irritation, becomes rough, squamous, and of a yellowish-brown colour. Lichen and eczema *impetiginodes* occasionally follow the papular eruption of this variety of prurigo.

2d. Prurigo *scroti* may exist alone or complicated with the prurigo *podicis*. It is characterized by papulæ developed upon the scrotum, and at times even on the penis. When the papulæ are torn with the nails they become extremely painful. Prurigo *pudendi muliebris* is likewise characterized by pruriginous papulæ evolved on the *mons veneris* and *labia majora*. The mucous membrane of the vulva occasionally presents, at the same time, a multitude of small solid elevations which render its surface rough and uneven; in this case there is frequently a true inflammation of the vulva and vagina, accompa-



nied with *intertrigo*. Lorry<sup>1</sup> has given a picture as faithful as it is animated of the symptoms and sufferings produced by prurigo and lichen of the genital organs. "Morbis ille adultos ut plurimum et primum pubertatis florem aggressor aditur, eosque qui, castè viventes, urgenti tamem impetu ad venerem ferrentur; mulieres etiam, sed maturius aditur. Ejus ortus primò mitior est, et pruritus totus continetur. At pruritus illi tum in maribus, tum in fæminis jungitur ardor in venerem inextinguibilis. Mores et præcepta repugnant, coercet virtus vivax, at manus indocilis ad has partes fertur, scalpendoque malum irritatur, et animus ipse in partem operis venit cum artuum tremore et palpitazione. Sedatur vulgò per plurimas horas malum, tuncque omnia tranquilla apparent, at recrudescit per paroxysmos, noctu potissimum afficiens. Sævit autem eò vehementius, quò aut familiariter magis aut proximè cum fæminis mares, aut cum maribus fæminæ vixerint. Nec minores acceperit vires a vino, piperatis, spiritibus, acribus alimentis, potu coffeæ, oleosorum spirituosorum, ita ut noverim viros qui nunquam similibus pruritibus, nisi una ex hisce causis accesserit, quas edocti experientiâ vitabant sedulius. Progrediente malo partes ad aspectum maculosæ, maculis flavis vix supra cutem extantibus distinctæ sunt; scrotum omninò rugosum est, ut et labia pudendorum in fæminis, et tempore paroxysmi prorsus retractum. Erectio penis et libidinis ardens cupido mentem incendunt. Partes illæ non eruptione lichenibus simili afficiuntur, sed epidermis rugosa olet, et alluitur liquore unctioso, non lintea maculante, non digitis adhærente, sed ad sensum lubrico. Incremento malo pruritus enormes fiunt, per paroxysmos et summè violentos, et frequentur rediunt, ita ut nec pudor, nec reverentia regum à scalpendo divertant, et sæpè per intervalla etiam paroxysmorum puncturæ acerrimæ acubus inflammationis per cutem transactis morsu similes, in clamorum adigunt: hinc partes illæ rhagadibus atque fissuris manu factis undiquè hiant. Ardor semper in est, et ad quemvis levissimum incessum exhalat humor olentissimus, fervente intereà œstro venero."

3d. Prurigo *plantaris*. M. Alibert has given an instance of a man, 50 years of age, but vigorous in constitution, who was suddenly attacked with a violent sense of itching in the sole of his foot, which soon acquired such a degree of intensity that even in the street and in company he was compelled to take off his shoe and scratch the part violently till the pruritus was in some sort appeased. A second case of a similar description is quoted by the same author; but in neither of the instances is there any mention of papulæ as the cause of the morbid symptoms, and as violent itching of the sole of the foot may be occasioned by various diseases, the species of prurigo under consideration is inadmissible until it shall have been confirmed by cases much more complete in their details than those we possess.

654. The *anatomical* inquiries that have been made into the seat and nature of prurigo by Alibert and Mouronval have no actual bearing but upon concomitant affections. One of Alibert's patients had died of a suppression of urine and pneumonia; the other presented numerous morbid appearances in the three great splanchnic cavities. In a third case we are informed that the papulæ had shrunk, death having been occasioned by a gastro-intestinal inflammation and an affection of the brain.

655. *Causes*.—Prurigo attacks infants, and the aged especially. It is more common among the poor than the rich, and occurs more frequently among men than women. The disease occasionally appears owing to a residence in low and damp situations, and particularly to a want of proper attention to cleanliness. Other causes have been surmised, the influence of which is more questionable, such as indifferently food, the abuse of spirituous liquors, salted and highly spiced meats, defective or irregular menstruation, vexation of mind, fatigue of body, &c., &c. It has also been observed that prurigo *mitis* generally invaded in the spring or beginning of summer, like lichen simplex, to which this disease, indeed, approximates, whilst prurigo *formicans* made its attacks at all seasons indifferently.

656. *Diagnosis*.—Itching or pruritus in a greater or less degree is a symptom common to almost all the inflammatory affections of the skin, particularly to urticaria, scabies, eczema, strophulus and lichen. Although this sensation has a peculiar character in prurigo, still it cannot be assumed as a pathognomonic symptom of the affection.

The true character of the disease lies in its presenting an eruption of irregularly disseminated papulæ, distinguished by their colour, which is similar to that of the surrounding skin, from the papulæ of lichen and strophulus.

When the papulæ of prurigo have been destroyed by the nails, the true nature of the eruption is made out with great difficulty, the little scabs of this affection differing but very little from those of lichen simplex and scabies; in the neighbourhood of the papulæ that have suffered, however, others that have escaped untouched may very commonly be discovered, and these proclaim the peculiar nature of the eruption. Prurigo is a papular, scabies a vesicular disease. In prurigo the papulæ present the colour of the integuments at large; in scabies the vesicles are transparent on the apices. The summits of the papulæ of prurigo when torn are covered by thin black crusts of dried blood; the vesicles of scabies when they have suffered in the same way are frequently succeeded by small thin and yellowish-coloured scabs. Scabies is readily transmissible from person to person; prurigo is not at all contagious. The pruritus of scabies is by no means a painful sensation; in prurigo it is sharp and burning, and patients labouring under it tear themselves with a kind of cruelty. Prurigo commonly appears on the shoulders, back, neck, loins, chest and limbs in the direction of their extension, very rarely between the fingers, occasionally on the face, and even on the scalp; scabies again occurs between the fingers, in the axillæ, popliteal regions, bends of the arms, and surface of the abdomen. The pruritus of scabies is constant, that of prurigo comes on in paroxysms of greater severity. Prurigo occasionally gets well spontaneously; scabies never terminates in this way, but it is much more under the influence of therapeutic agency than prurigo.

It may happen, indeed, that prurigo is complicated with scabies. Among the solid papulæ of the former the acuminate vesicles of the latter are then distinguished without difficulty. Lichen and the various other inflammatory affections of the skin may in like manner attack individuals labouring under prurigo. Such complicated cases of course require great discrimination in deducing accurate diagnoses.

Local prurigo cannot well be confounded with scabies; but it is more difficult to distinguish it from several other affections, which are themselves accompanied with pruritus of greater or less intensity. 1st. Ascarides in the rectum, hemorrhoidal tumours, slight inflammation or irritation of the great intestines, are all occasional causes of violent itching of the verge of the anus. These complaints differ from prurigo *podicis* by the absence of papulæ, and the presence of other manifest lesions which form no part of this eruptive disease. 2d. The pruritus caused by pediculi *pubis*, by eczema *impetiginodes* *scroti*, &c., need never be confounded with that which depends upon prurigo of these regions: the papulæ characteristic of the latter malady will always prevent mistake; a proper examination of the parts interested, indeed, will constantly enable the practitioner to ascertain whether any violent sensation of pruritus complained of about the anus, scrotum, vulva, &c., depends on the development of the papulæ of prurigo, or is due to another form of inflammation than the papular affecting these parts, to the presence of ascarides in the rectum, &c.

We had an out-patient at the Hôpital de la Charité, twenty-four years of age, in the ninth month of her pregnancy, who for a month had suffered from intolerable pruritus of the genital organs, accompanied, and apparently produced by a cluster of varicose veins upon the left greater labium, as there were no symptoms of any inflammatory affection of the parts implicated. The pruritus was completely removed by a single bleeding. Willan has quoted several analogous cases.

657. *Prognosis*.—Prurigo in children is not generally a very obstinate disease, but it is apt to recur repeatedly. Prurigo *senilis* is a much more serious affection, and often resists the best directed treatment. Tormented by the continual and at times excessive pruritus, patients tear themselves cruelly with their nails; but to the momentary relief thus procured, their enemy speedily returns in such burning and unbearable intensity, that they are frequently driven to acts of despair. The prurigo *podicis*, and prurigo *pudendi muliebris* are commonly very rebellious.

I have several times seen prurigo, with or without pediculi, appear

<sup>1</sup> Lorry. De morbis cutaneis, 4to. p. 449.



as a kind of crisis after measles, or some other more serious disease. Among the aged, living in misery, it frequently coincides with pulmonary catarrh, without, however, appearing to have any influence on the progress or duration of this infirmity.

658. *Treatment*.—The simple or slightly sulphureous bath is of all external remedies, that which proves constantly most beneficial in general prurigo. By this means alone, we very commonly succeed in speedily subduing the prurigo which is induced by filth and wretchedness. The baths ought to be taken tepid or cold; at too high a temperature they are injurious; at any degree under tepid they are very serviceable in prurigo *mitis* and prurigo *senilis*. They ought to be taken regularly every day, and the patient must greatly protract the period of his remaining in the water, even though this should appear to be followed by some temporary increase in the symptoms. Patients seem occasionally to experience more marked relief, by soaking for an hour every day in a bath of some emollient decoction, as of bran. The same means are further useful in preventing relapses of this disease. After the simple or emollient bath has been used for some time, if the eruption still continues, the alkaline bath, such as that of Plombières, or the soap bath frequently produces the best effects. These baths leave no unpleasant odour after their use, like those of sulphureous waters, which are, however, extremely efficacious in many cases, especially among the aged, and those individuals whose general health has suffered from bad or insufficient food. When sulphureous baths appear to increase the irritation of the skin, their action may be diminished by lessening the dose of the sulphuret of potash employed in making them, by adding a quantity of gelatin, or employing the sulphur and the simple bath alternately. This plan of treatment succeeds almost invariably in children affected with prurigo *mitis*.

Sea-water baths, tepid or cold, are employed under the same circumstances as sulphureous baths. Several cures have also been accomplished by means of sulphureous fumigations; the irritation they are apt to excite in the skin, however, frequently compels us to abandon their regular employment, or to combine them with the occasional use of the simple water, vapour, or emollient bath. The sulphureous bath is preferable to any other in the cases of children.

When prurigo is of long standing, or otherwise, when the skin has become rough and thickened, it is sometimes advisable to try the watery-vapour bath from time to time; in general, however, this form of bath is found detrimental to young and plethoric subjects, to children, and especially to the aged. It has been known to cause syncope, which, though not dangerous, perhaps, is still sufficiently distressing to the patient.

It is very seldom that any good is done by the application of the ointments of sulphur or of any of the mercurial preparations, or by lotions of sublimate and lime water, except in those cases that are complicated with scabies.

The pruritus has occasionally seemed to be mitigated by anointing the parts affected with an ointment of hellebore, and of the hydrochlorate of ammonia.

Mercurial washes may be tried with advantage in some cases of prurigo *formicans*, especially when complicated with pediculi. In other instances by merely washing the parts affected with plain cold or tepid water, or with very weak vinegar and water, the greatest relief is procured.

659. Of all the general measures employed in the treatment of prurigo, blood-letting, and diluents, such as whey, weak veal broth, thin gruel, decoction of dog's tooth grass, lemonade, &c., are indisputably the most potent. Bleeding is almost always indicated in youthful and plethoric subjects, and when the disease is attended with distressing insomnia, even in the aged. In females labouring under prurigo, if the catamenia are suppressed, the return of the discharge must be solicited by the application of leeches to the external parts, &c. When the disease invades during pregnancy, should any symptom of plethora be apparent, bleeding must still be had recourse to.

Those persons who have indulged in highly-seasoned food and spirituous liquors, must be restricted for some time to simple vegetable diet, and put upon the use of asses' or goat's milk.

660. Some writers recommend the exhibition of an emetic, and a purge on the invasion of prurigo; others advise decoctions of the burr-dock and potentilla, infusions of wild endive, fumitory, chamo-

mile flowers, &c., or the defecated expressed juice of these plants; and others assure us that they have derived the best effects from the exhibition of sulphur alone. Calomel is also prescribed, combined with the use of the neutral salts, and other more active purgatives. External applications have appeared to me so generally advantageous, that, except in some modified cases, depending on peculiarities of constitution, I recommend the treatment to be confined entirely to these.

661. The varieties of local prurigo themselves present several peculiar indications: 1st. Prurigo *podicis* is in general difficult of cure. When it is severe, it requires imperatively the employment of local bleeding, and even in cases of less intensity, this measure is constantly followed by the most marked temporary amelioration of the symptoms. Emollient cool or cold poultices, hip-baths, suppositories of cacao butter, opiate lavements, compresses dipped in cold water, are all useful in allaying pruritus. After a due perseverance in these measures, and occasionally even from the first, in individuals whose skin is rather irritable, the best effects are derived from gelatino-sulphureous douches. The application of a small quantity of the unguentum nitratis hydrargyri reduced, and of a weak acetic acid wash, is also frequently prescribed with advantage; these means, however, will do harm rather than good, if the integuments around the anus chance to be excoriated, or in a very irritable state.

2d. The same treatment is applicable in cases of prurigo *scroti*, which has now been recommended in prurigo *podicis*. Washes consisting of solutions of sublimate in lime-water, and the mercurial liniments recommended by Willan, are generally less useful than gelatino-sulphureous fomentations, douches and baths.

3d. The treatment of prurigo *pudendi muliebris* should be begun by a bleeding from the foot, if the state of the constitution seem to warrant the practice, by the repeated application of leeches to the vulva, by fomentations and douches of cold water, mixed with the juices of emollient and narcotic plants. Gelatino-sulphureous douches are never to be employed in the earlier stages of the disease; they would but increase the inflammation of the external parts and vagina, which almost always accompanies this variety of prurigo. (a)

(a) Professional advice is more frequently asked for in prurigo or pruritus pudendi than for any other variety of porrigo. It is most common during pregnancy and disappears in general after childbirth. Dr. Dewees (*Diseases of Females*) regarded this disease as aphthæ of the inner surface of the genital parts; an opinion adopted in its full extent by Rigby (*System of Midwifery*), and Churchill (*Diseases of Females*). Dr. C. D. Meigs tells us, on the other hand, in his additions to his translation of the treatise of Colombat de l'Isère on the Diseases and Special Hygiene of Females, that he has not perceived, upon examination, this aphthous condition of the mucous surface. Dr. Ashwell (*Practical Treatise on Diseases of Females*) takes a more extended view of the pathology of prurigo pudendi, in pointing out its connection with some diseases of the uterus and its appendages, as indeed Blundel had done before him, and also of affections of the urinary bladder and its meatus. Dr. Ashwell has, "on some occasions, admitted patients into the ward for some supposed affection of the vulva, which has turned out to be pruritus from disease of the bladder."

The treatment will of course vary with the general health and state of the uterine system. After suitable purging with laxatives, the use of sedatives sometimes allays the irritation. Of the local remedies, the one most thought of in this country, and more successful, perhaps, than any one other, is borax (sub-borate of soda) in solution of water and alcohol applied freely and frequently to the parts affected. Dr. Meigs (*op. cit.*) says that he has rarely had occasion to order any thing more than the following formula, viz:

R. Sodæ borat. ʒss;  
Morphæ sulphat. gr. vi;  
Aq. rosæ destillat. ʒviii.  
M. Ft. solutio.

He directs the person to apply it thrice a day to the affected parts, by means of a bit of sponge or a piece of linen, taking the precaution first to wash the surfaces with tepid water and soap, and to dry them before applying the lotion.



Patients should be cautioned against the use of a seat and bed that are too soft, as these excite and keep up a great degree of heat around the affected parts. During the paroxysms, which almost always occur through the night, patients occasionally succeed in allaying the pruritus that devours them, by applying, without intermission, a succession of cloths wrung out of cold water, to the external organs. Fumigations of sulphur or of cinibar have also been occasionally prescribed with success in very rebellious pruriginous eruptions of the margin of the anus and genital organs. I have, further, oftener than once had recourse to arsenical preparations with advantage in affections of the same description. (a)

#### Historical Notices and particular Cases.

662. It was probably prurigo senilis to which Hippocrates alluded when among the diseases affecting the aged, he mentions an *itchy state* of the whole body.<sup>1</sup>

The definition which Dietrich<sup>2</sup> has given of *cnesmos*, after Galen, is obscure, and applicable to several other pruriginous diseases (lichen, urticaria, strophulus). The definition of Mercurialis,<sup>3</sup> although more precise, still presents us with as many of the characters of lichen as of those that belong to prurigo. Hafenreffer<sup>4</sup> subsequently proposed to distinguish *pruritus* into *general* and *local*. But it must still be

I have found the borax solution to cure some cases, and that of the chloride of lime or of soda others. Hydrocyanic acid in adequate dilution as a wash, has been highly extolled in this disease, or as in the following lotion: R. Liq. potass. f3ij; Acid. hydrocyan. dilut. f3i; Emuls. amygd. amer. f3viii.—M. Iodine is used both topically and generally. Penciling the affected parts with a weak solution of nitrate of silver, (2 grs. to the ounce of water and 2 minims of nitric acid,) is sometimes beneficial.

The relief given by lotions of vinegar or of vinegar and water would suggest the use of diluted lemon juice in prurigo *pudendi*, even if we did not know that this latter has entirely carried off prurigo *scroti*.

In this latter affection the interposition of a fold of linen or muslin, as the skirt of the shirt between the sides of the scrotum and the thighs, will often materially abate and sometimes prevent the troublesome itching,—by diminishing the heat of the parts.

(a) Mr. Wilson introduces the subjoined formulæ “recommended by French dermatologists, and quoted by M. Gibert.”

“R. Hydrate of lime, 3ij;  
Subcarbonate of soda;  
Laudanum aa 3ss;  
Lard, 3j. M.

“Anti-pruriginous ointment recommended by Alibert:—

R. Laudanum;  
Sublimed sulphur aa 3ss;  
Oxide of zinc, 3j;  
Oil of almonds, 3j;  
Lard, 3iij. M.

“Ointment employed successfully by Bielt for an obstinate prurigo of the hands:—

R. Cinnabar;  
Laudanum aa 3ij;  
Sublimed sulphur, 3ss;  
Lard, 3v. M.

“Ointment for local prurigo:—

R. Muriate of ammonia, 3j;  
Powder of white hellebore, 3ss;  
Lard, 3iij. M.”

allowed that the true character of *prurigo*, to wit, the existence of pruriginous papulæ of the same colour as the skin, was first pointed out by Willan,<sup>5</sup> whose labours are given by Bateman in a condensed shape, in his Synopsis. The subsequent observations of Alibert,<sup>6</sup> of Chamberet,<sup>7</sup> and of Mouronval,<sup>8</sup> as well as those published by Sommer and Lœscher on prurigo senilis,<sup>9</sup> deserve to be particularly consulted. It is much to be regretted that pathological writers have so often employed the vague terms *bouton*, *spot*, *eruption*, *rash*, &c., to indicate a host of other cutaneous affections, as well as the one that now particularly engages our attention; great pains, too, have been taken to signalize the characters that distinguish prurigo from scabies, whilst little has been said on the difference between prurigo and lichen, a papular disease, with which it has many more points in common. Many cases entitled *prurigo* by M. Mouronval, even appear to me to be true *lichens*, particularly the fifth, that is quoted in his essay, in which he says that “the spots (*boutons*) were red and prominent, or arranged in clusters, so as to form irregularly rounded patches.” A few cases of prurigo may be found detailed in different periodical publications;<sup>10</sup> and a very remarkable one occurs in Mr. Wilkinson’s work,<sup>11</sup> who found the patient seated naked on his bed, and tearing his skin with a comb.

CASE CV.—*Eruption of furuncles and prurigo, after a severe illness.* G. Cuny, aged sixty-five, of vigorous constitution, but apparently living in filth and wretchedness. About seven years ago he was attacked with a putrid fever, for which he became, at four different times, a patient in the Hôpital de la Pitié, having had relapses as often, and never getting completely convalescent. Immediately after this attack he suffered from an eruption of boils, which appeared on almost every part of his body, during a period of four months. No sooner had the boils disappeared than the patient became affected with the cutaneous eruption under which he now labours; the disease, consequently, dates at least six years back.

At the time of its appearance he neither suffered from fever nor from disturbance in any of the functions. A number of small spots (*boutons*) were thrown out simultaneously over the whole of his body, even upon the hairy scalp and eyelids. The eyes also at length shared in the irritation, which did not then spare the palms of the hands and soles of the feet. Ever since its appearance this eruption has not ceased to torment the patient with a feeling of *general heat*, a sensation of burning, and a pruritus which lasts for hours, and even for nights, and obliges him to tear his skin with his nails, which he has been careful not to cut since the commencement of his malady. The nails of his thumbs are, in fact, nearly half an inch long, those of the fingers somewhat shorter. When the pruritus becomes excessive, he relieves himself by digging these claws into the substance of his skin. Unable any longer to contend with the torments he endured, Cuny presented himself for admission into the Hôpital de la Charité. On the 20th of June, 1827, he was in the following state:—

The skin is filthy and looks generally red; over every part of the surface are perceived crusts of dried blood, yellowish stains, and small papulæ; it is, further, furrowed and marked with scratches in all directions. A few untouched papulæ occur on the back, and tops of the shoulders; these are of the size of small pins’ heads, little different in colour from that of the skin, and affected with a violent itchiness. On the same parts, the small of the back, flanks, chest and arms, traces occur of a still greater number of papulæ, which the patient has torn with his nails, and whose summits are covered with a

<sup>5</sup> Willan. Description and treatment of cutaneous diseases. Art. Prurigo, 4to. London, 1798.

<sup>6</sup> Alibert. Quelques considérations sur le prurigo formicans. (Nouvelle biblioth. médic., mai, 1825.)

<sup>7</sup> De Chamberet. Diss. sur le prurigo, 4to. Paris, 1808.

<sup>8</sup> Mouronval. Recherches et observations sur le prurigo, in-4. Paris, 1808.

<sup>9</sup> Sommer. De affectibus pruriginosis senum. Altdorf, 1727. Lœscher. De pruritu senili. Wittenberg, 1728.

<sup>10</sup> Revue médicale, Juin, 1830, p. 353 (hérédité). Archives générales de médecine, t. xvi. p. 291 (prurigo guéri par le vin de Colchique). Journ. hebdom., t. vii. p. 428. Revue médicale, t. ii. p. 454 (prurigo guéri par l’acide prussique). Revue médicale, Février, 1829; Juillet, 1830 (prurit de la vulve). Gazette des hôpitaux, p. 352 (prurigo du pudendum traité par le sous-carbonate de potasse). Lond. Med. Gazette, v. xi. p. 34. Forestus, under the title of pruritus ani (Obs. lib. xxii. obs. ii.), and of pruritus auris (Obs. et curat. medicin., lib. xi. Schol.), describes, but in a vague manner, pruriginous affections of these parts.

<sup>11</sup> Wilkinson’s Remarks on Cutaneous Diseases, 8vo. London, 1832.

<sup>1</sup> Aphorismi. Sect. iii. aph. 31.—Epidem. lib. v.

<sup>2</sup> Iatrum Hippocraticum. In-4. Ulm., 1661.

<sup>3</sup> Oportet tamen ante alia adnotare, quod omnes illi affectus quibus jungitur pruritus, differentes sunt ab hoc pruritu; quia in illis vel tumor, vel exulceratio, vel excoarctatio aliqua apparet, in pruritu nihil horum. Videntur carnes parum mutatae, asperiores quidem aliquo pacto, sed sine tumore insigni, exulceratione et excoarctatione. Præterea in aliis affectibus, qui junctum habent pruritus, à cute semper emanat aliqua sanies: in pruritu nihil emanat, nisi, ut ait Avicenna, quædam corpora furfuracea, atque neque hæc emanant, nisi cutis unguibus deliniatur. (Mercuriali. De morbis cutaneis, lib. ii. cap. 3, p. 62.)

<sup>4</sup> Hafenreffer. De cutis affectibus, lib. i. cap. 14.



little crust of coagulated blood, of different shades of black according to its age, and nearly a line in diameter. The finger passed over the remains of the papulæ detects a hardness in the skin of the points affected. The base of several of the headless papulæ is red, and around some of them a furfuraceous desquamation appears to be going on; this is the case more especially about the lower parts of the loins. On the shoulders, upper parts of the back and arms, a number of slight scabs, of small extent and irregular shapes, are perceived, which in some places assume the appearance of a furfuraceous desquamation. The scabs are yellowish, or of a dirty gray colour; the skin under them is moist, and they appear to be formed by the desiccation of fluids effused from some accidental vesicles. On the front of the chest and shoulders a number of small tubercular indurations are perceived, round or irregular in shape, projecting slightly above the level of the skin, of a rosy red colour, and from one to two or three lines in diameter on the surface. These give the patient no uneasiness.

Amidst these various alterations, the numerous scratches which the patient had inflicted on himself, were easily recognized by the linear sanguineous incrustations which cover such injuries. Several pediculi were likewise discovered on the surface.

The skin on the parts of the body which have not been mentioned was merely hard and dry, and seemed to have lost its natural pliancy; its colour was made up of a mixture of different shades of red, violet and pale yellow, blending one with another. The principal functions seemed to be performed with perfect regularity. (*The cool and tepid bath; decoction of dog's-tooth grass for drink; the three-quarters hospital allowance*). June 24th.—The patient has taken the tepid bath twice, with the effect of cleansing his skin and freeing it from sanguinolent scabs and furfuræ, so that it now appears covered with minute dots, and small excoriated lines, the effects of scratching and tearing the papulæ. The small tuberculated indurations still continue. The sanguinolent scabs of the lower part of the back and loins are succeeded by red points, scarcely perceptible, around which the cuticle appears raised in a furfuraceous ring to the extent of a line; these are so numerous that they run into each other, and the desquamation over the regions mentioned, is nearly general. 26th.—Perseverance in the use of the bath has caused the furfuraceous desquamation to disappear, so that the skin of the back and loins now looks healthy. 29th.—(*V. S. B. ad 3viii; ointment of black hellebore*.) 30th.—The bleeding has appeased the pruritus and smarting notably. July 7th.—The skin has now regained nearly its natural appearance; it is only roughish, dry, and of a deep brown tint—characters which are common in the aged, especially among those who, like Cuny, have laboured hard all their lives. He was dismissed completely cured on the above day.

The patient has since presented himself at the baths of La Charité for the sake of cleanliness. He has suffered no return of his infirmity.

CASE CVI.—*Prurigo pudendi*.—Madame C \* \* \*, twenty-six years of age, was attacked with this disease in the month of February, 1823. This patient's catamenia had never been regular, and although a wife for several years she had not become pregnant. On the upper and inner parts of the thighs, near the greater labia, and upon these parts themselves, were detected a number of distinct papulæ nearly of the same colour as the skin upon which they were evolved. The tops of several other papulæ were covered with small blackish, flattened and very adherent crusts. The skin of the private parts also bore traces of several scratches. The external passages were red and inflamed, and there was some discharge from the vagina. During the day the parts affected were the seat of an incessant pruritus, which grew more severe in the course of the evening, completely interrupted sleep, and, exasperated by the endeavour of the patient to appease it by scratching, only gave place to a painful orgasm, which lasted through a great part of the night. Leeches were applied repeatedly to the vulva; the patient was bled from the foot; and the hip-bath, tepid, and with the addition of a narcotic infusion, was taken every day; a large blister was subsequently applied to the lumbar region; but at the end of two months and a half, during which this plan of treatment was pursued, a merely temporary amelioration was all that had been obtained. I now consulted with M. Dupuytren, and it was agreed to try the effect of the gelatino-sulphureous douche. After the first few days, this application had indeed a wonderful influ-

ence in allaying the irritation. The patient at once recovered her tranquillity and her sleep; and after using the remedy twenty-five times at the temperature of 25° R., for ten or fifteen minutes each time, she obtained a complete cure, as well of the papular affection as of the leucorrhœa which it had occasioned. The menstrual function did not become more regular after this; Madame C. did not fall pregnant; but three years have now elapsed since she recovered her health without any recurrence of the prurigo.

CASE CVII.—*Prurigo of the scrotum and anus*.—Verset, sixty years of age, was admitted a patient at the fourth Dispensary, June the 26th, 1825. Ever since October, 1824, this patient had laboured under a prurigo of the scrotum, upper and anterior parts of the thighs, and margin of the anus, against which he had employed various remedies in vain. June 27th.—On the parts mentioned a number of voluminous papulæ, having the same colour as the skin, which was not inflamed, were very conspicuous. A much larger number, however, had had their heads removed by the nails of the patient, who found it impossible to refrain from scratching every instant. The papulæ in this condition were covered with a small black crust. Although continually tormented by the pruritus, and tasting only broken and unrefreshing slumbers, Verset's general health did not appear to have suffered. I prescribed fomentations of the sulphureous mineral water of Barèges, with two ounces of gelatin dissolved in each pint of the fluid. This prescription was followed by great relief: after it had been continued four or five days, the papulæ appeared shrunk, and the patient enjoyed tranquil and uninterrupted sleep, which he had not known for eight months. (*Same fomentations; tartaric acid drink*.) July 4th.—The patient continues better; he has used some of the fomentation by way of lavement, and the itchiness he had felt in the rectum was alleviated by this means. The scrotum is the only part upon which papulæ can still be traced; by the 4th these had vanished; the pruritus was complained of less and less; and by continuing the same measures, applying fifteen leeches to the verge of the anus, and taking the tepid-bath twice, the prurigo was completely cured on the 8th of October, 1825.

#### PAPULAR INFLAMMATIONS ARTIFICIALLY EXCITED.

663. Vesicular and pustular forms of inflammation are much more frequently and readily produced by artificial excitement than papulæ. I shall, however, give an account of one case in which a papular eruption was produced by the contact of fulminating quicksilver. Mr. North has given several instances in which an eruption was excited by the internal use of the cubebs pepper, which, in some respects, presented the characters of lichen, but in many more those of roseola and urticaria.<sup>1</sup>

CASE CVIII.—*Papular eruption produced by fulminating mercury*. Guillemot, aged thirty-six, was attacked a fortnight ago with a disease on the skin, which he designated by the universal title of tetter (*dartre*). On the 1st of January, 1834, he commenced working in a manufactory of detonating caps for guns, pistols, &c. The principal ingredient in these articles is fulminating mercury, and the air of the manufactory is so much loaded with this substance in fine powder, that fresh workmen are always troubled with repeated fits of sneezing for two or three days after they enter on the business there carried on. Guillemot soon began to complain of a violent sensation of itching in the face; this was followed the next day by an eruption, which continued up to the time of his entering the hôpital de la Charité, but disappeared entirely within eight-and-forty hours after his reception.

On the 3d of March, Guillemot again presented himself at La Charité, having ceased from his work the preceding evening. Upon the skin of the forehead, and back of the neck particularly, there was an eruption of small red points, rather crowded together, prominent, rough, containing no fluid, and fading but little under the pressure of the finger. The skin in the spaces between these papulæ was healthy, and the eruption was attended with a considerable degree of pruritus. A few spots, perfectly similar to those described, were also discovered on the penis. The patient's teeth were black

<sup>1</sup> Arch. gén. de médecine, Juill., 1832.



and loose, and the gums ulcerated; there was no fever, the appetite was good, and the patient slept well. The patient was put upon the use of the nitric acid, and in two days the eruption began to fade; by the fourth day it had totally disappeared. (*The tepid bath.*) The patient again complained of itching on the fifth day; but nothing beyond some yellowish stains could be discovered on the forehead. On the eighth day the patient went out well.

## VIII.—SQUAMÆ. SQUAMOUS INFLAMMATIONS.

Vocab. *Squamæ, Scale.*

664. It is the distinguishing character of the squamous inflammations to appear as red elevations, spots, or blotches, upon which *squamæ*, in other words, laminæ of the cuticle, altered in various degrees, are formed, thrown off, and incessantly renewed.

665. The number of squamous inflammations reckoned is six: Lepra, Psoriasis, Pityriasis, Pellagra, Acrodynia, and Scaly Syphilis. I shall treat of pellagra and acrodynia when speaking of the cutaneous diseases peculiar to certain countries; and the history of squamous syphilis will form part of that of the venereal disease in general. I have, further, separated from the group of pityriasis, two varieties of cutaneous affection described by Willan under the heads pityriasis *versicolor*, and pityriasis *nigra*. These I denominate chloasma, and melema, as I hold that they belong essentially to the class of pigimentary affections.

Mr. Plumbe and Dr. Duffin have proposed to unite the description of lepra to that of psoriasis. To place the distinguishing characters of these two diseases in greater relief, I have continued to describe them separately, although I still acknowledge the striking analogy that exists between their various symptoms. Inflammation of the reticular tissue and papillæ is the first and main feature of squamous affections. The *squamæ* are a secondary phenomenon to which Willan attached too much importance when he assimilated ichthyosis to this class of diseases.

666. In an anatomical point of view, the analogy of the squamous inflammations to the exanthemata is indisputable. In both classes of disease there is sanguineous injection followed by desquamation. In the squamous forms of inflammation, however, the two phenomena continue to co-exist, frequently during a very considerable length of time, whilst in the exanthemata, the redness and desquamation succeed each other, and usually occur but once. Nevertheless, when any of the exanthemata, erythema, for example, passes into the chronic state, it assumes almost the whole of the appearances characteristic of squamous inflammation.

667. Two squamous inflammatory affections, lepra and psoriasis, make their appearance in the shape of small, hard, prominent, and papular-looking elevations, the tops of which soon become covered with *squamæ* of a dull white colour. These elevations unite, and then change into scaly patches of various forms and dimensions, which may either be in small numbers and limited to a single region of the body, or occur disseminated over the whole of its surface. In the latter case, the desquamation is frequently so copious that the bed and clothes of the patient become filled with dry and whitish-looking scales.

The dermis beneath the scaly patches is found red and inflamed, and inveterate squamous affections are always accompanied with chapping and a morbid increase of thickness in the skin.

Squamous inflammations occasionally remained confined to the points which they have first invaded, or they quit these to show themselves on others. They sometimes cause itching, tingling and an unpleasant sensation of heat, phenomena all of which are constantly increased by such causes as tend to raise the external temperature of the body. These sensations are usually very violent in pityriasis. The insensible perspiration appears occasionally to be diminished in the places occupied by the *squamæ*.

668. The various forms of squamous inflammation frequently complicate each other,—a new proof of their analogy. They are rarely combined with any other form of cutaneous affection.

669. Squamous diseases are much more common among the lower classes of society than among the higher. These diseases are observed at all seasons of the year, although they are more apt to make their attacks in the autumn and spring. Women seem more subject to them than men. No one of them is contagious; but numerous instances prove that they are hereditary.

670. It is necessary to distinguish the squamous inflammations properly so called, from the natural epidermic exfoliations that take place from the skin of new-born infants,<sup>1</sup> and of the aged, phenomena which will be mentioned by and by.

The squamous are not liable to be confounded with any of the other forms of cutaneous disease, when their elementary appearances have undergone no change. It is true, indeed, that *squamæ* are observed in the second period of the exanthemata, and of some papular and vesicular diseases, particularly chronic eczema, and lichen *agrius*; but besides the fact, that a few vesicles or papulæ may almost uniformly be detected in the vicinity of these squamous surfaces, which proclaim the nature of the existing inflammation, there are such differences in the whole appearance of these various diseases that it is impossible to mistake the one for the other. To conclude, the squamous phlegmasiæ cannot be confounded with ichthyosis in which the dermis is unaffected with any degree of redness, and the seat of no morbid sensation.

When treating of lepra, psoriasis and pityriasis, I shall take care to point out the particular features that distinguish these diseases severally.

671. The squamous inflammations commonly require several months and sometimes several years of treatment for their cure. They are the more obstinate as they occupy a larger extent of surface, and as they are of longer standing.

672. With regard to treatment, few of the phlegmasiæ have so many points of resemblance as the squamous inflammations; to be satisfied of this it is enough to glance from the treatment of lepra to that of psoriasis.

## LEPRA.

Vocab. *Alphos, Lepra, Leuce, Melas, Dartre surfuracée arrondie.*

673. The word *lepra*, which was long used to signify almost the whole of the chronic diseases of the skin when they had attained a high degree of severity, is now employed in a limited and more determinate sense to designate a chronic inflammation of the integuments, characterized by scaly patches of different dimensions, of a round or orbicular shape, depressed in the centre, surrounded by a red and prominent circle, and either disseminated over the surface of the skin or united into one or more patches of larger size and more irregular shape.

674. *Symptoms.*—Lepra is occasionally seen confined to the elbows and knees. Its orbicular patches generally make their first appearance on the extremities, and usually on the parts below the knees and elbows. In the majority of instances it is developed on both legs or both arms at the same time. It is then apt to extend by the successive formation of new scaly patches along the arms and thighs to the breast and shoulders, and to the lumbar and lateral regions of the abdomen. The patches are often more numerous and prominent on the lower part of the belly than elsewhere. The disease rarely extends to the hands or hairy scalp. The patches that do occur on the head are generally of small size. A few are occasionally seen around the outer angles of the orbits, from whence they spread along the eyebrows to the forehead and temples. The patches are everywhere apt to coalesce by their corresponding edges, but the originally orbicular form of the parts composing these aggregate patches is still proclaimed by the arcs of circles which are seen in their circumference.

<sup>1</sup> Billard. *Mal des Enf. nouveau-nés*, p. 32, 8vo. Paris, 1828.



675. The *lepra vulgaris* of Willan, the *dartre furfuracée arrondie* of Alibert, invades in the shape of small solid elevations, around which numbers of other reddish-coloured, prominent spots, about a line in diameter, of a circular form and firm consistency are evolved. It was undoubtedly this papular appearance which led Willan to imagine that lepra was owing to an induration of the papillæ of the skin.

The summit of these elevations, the appearance of which is frequently successive, smooth in the earlier stages of their existence, become covered some few days after their formation with a small epidermic scale, white, semi-transparent, smooth and polished. This minute spangle-like scale is detached before long, and its fall is announced by a feeling of tingling or pruritus. The small space of skin which it covered is now found red and is rough to the touch. In the centre of the inner surface of the scale which is thrown off, a minute eminence may be perceived, less consistent than the other parts and which appears to have been lodged in a slight depression of the skin; it is even observed to be tinged with blood when violence has been employed in removing the scale.

These small scaly spots, after having thus shed their covering once, enlarge in rather a rapid manner, until they measure an inch and even more in diameter, but *always preserving a circular shape*. They are speedily again covered with squamæ, which are dry, glistening, somewhat opalescent, tough, and of a pearl-gray or pale yellow tint. They are bounded by a rosy, or purplish and *slightly elevated* margin, so that the centre of each patch appears somewhat *depressed*. The squamæ, which almost always adhere very firmly to the skin, are by no means evenly and regularly spread over the surface of the leprous patches, which are never seen covered by a single scale. The squamæ are superposed, especially in the circumference of the patches, and become thicker and thicker so as to form prominent layers. The exposed parts of the squamæ often acquire a whitish tinge; they are detached partially and irregularly. After their fall the small orbicular surfaces of the skin which they had covered, look red and shining, and rise above the level of the healthy parts which surround them. If the leprous patches are recent, the corion does not present lines in correspondence with those of the cuticle; but impressions of this kind are observed on the patches of older standing. In the latter case, indeed, they occasionally present a furrowed appearance, from an increase in the naturally superficial wrinkles of the skin, which are found in correspondence with smaller slight projecting lines situated on the inner surface of the squamæ.

After being freed from scales naturally, or by art, the surface of leprous patches is speedily covered by a fresh formation of squamæ, so that in the course of a few months or several years the parts affected may have presented a greater or smaller number of successive desquamations.

The spontaneous or artificial cure of the orbicular patches of lepra begins in the centre, and extends towards the circumference. After the detachment of the squamæ from the patches, the skin, when they are not renewed, first acquires a grayish tint with a shade of yellow; at a later period the ring which bounds the patches is narrowed progressively from within outwards, the circle breaks at length in one or more places, and the spot subsequently disappears entirely.

Upon some regions and in particular individuals, the squamous patches of lepra remain of inconsiderable size, never exceeding a few lines in diameter; they also increase very slowly and are but little prominent, rarely run into one another, are developed almost exclusively on the extremities, and differ from the patches of *lepra vulgaris* by the whiteness and small size of the squamæ that are formed. This constitutes the variety entitled *lepra alphoides* by Willan. It is more commonly observed among children than adults or the aged, and is not easily distinguished from psoriasis *guttata*. Further, the scaly and orbicular patches of lepra may present a particular appearance, produced by the confluence of the primary spots or scaly rounds. They then extend over large surfaces, and are often symmetrically disposed on the two sides of the body.

I have, moreover, observed lepra under another form, that, namely, of arcs of circles a few lines in diameter, red, prominent, devoid of scales and bounding surfaces of various extent, occasionally as much as five or six inches across, the skin of which had either a yellowish

cast, or appeared perfectly healthy. This variety, in its progress at least, has the most striking analogy with the centrifugal palmar psoriasis. Although most commonly encountered on the trunk, I have met with this variety of lepra exclusively on the lower part of one forearm and hand, on the anterior and posterior aspects of which it formed a kind of irregularly circular wreath.

When lepra is long neglected, or when it extends to the fingers, the disease may at length reach the matrices of the nails. These appendages then become thick, rough, opaque, of a dirty yellow colour, and crooked at their ends, whilst their roots are thickened, and look as if they were formed of many distinct and superposed layers.

Lepra is very seldom seen exclusively on the hairy scalp. When it is, the squamæ are commonly yellow and furfureous; they have none of the glistening micaceous appearance which they present on the knees and elbows.

When the number of squamous patches is not very considerable, and they are not highly inflamed, lepra is attended with no morbid sensation, unless it be some slight degree of itching when the temperature of the surface is increased by exercise and the warmth of a bed. This sensation, according to Mr. Plumbe, is caused by the detachment of the circumference of the squamæ, which is affected by the swelling of the areola surrounding the patches. It is certain that sensations of tingling and pruritus are no longer perceived by patients labouring under lepra, when no new scales are formed beneath those that already exist, and that the disease is then tending to recovery.

When the patches of lepra are inflamed and extensively diffused over the surface of the body, they may be attended with pain and a feeling of tension in the skin of the extremities. The inflammation has been seen running to such a height, that it impeded the motions of the joints, and obliged patients to keep their beds, every movement of the body producing deep chaps and a very singular crackling noise.

The influence of lepra does not seem to extend beyond the parts of the skin which are immediately attacked; the disease appears to be essentially local. If several authors could be named who, in describing this affection as symptomatic, have specified different other morbid phenomena, especially an alteration of the voice, it is owing to their having confounded lepra with the Greek elephantiasis, and regarded two diseases every way distinct as varieties of the same affection.

676. *Observations on Structure*.—The whole of the tissues which enter into the formation of the skin, do not appear to be alike affected in lepra. It has been conjectured that the vessels secreting the epidermis labour under a chronic irritation, the effect of which is to render the production of this substance more copious than natural; but as this hypothesis offers no explanation of the orbicular form of the patches, some pathologists have supposed that the superficial vessels of the skin were disposed in small concentric circles; others have maintained that the circular arrangement of the squamæ was a natural consequence of their development under the form of a round elevation, the inflammation in spreading still retaining its primary form.

I have ascertained that the papillæ are more largely developed on the leprous patches than on the healthy skin.

677. *Causes*.—Lepra is common to both sexes, and occurs at all ages; I have not myself met with the disease in infants at the breast, but I have had frequent occasion to see it after the period of the first dentition. Mr. Wilson assures us, that it is observed more frequently at the present day in England than it used to be formerly; but it is very possible that the disease was long misunderstood or imperfectly described under other names. Heberden in particular was probably mistaken when he said, that lepra was very rare in England,—“*de vero scorbuto et lepra nihil habeo quod dicam, nam alter rarissimus est in urbibus, altera in Angliâ penè ignota*,” unless, indeed, by *lepra* he intended to refer to elephantiasis, a suspicion which seems to acquire confirmation from the fact that several French practitioners, entertaining confused notions of the nature of lepra, forgetting the characters which had been anciently assigned to the disease, and confounding it with elephantiasis, (the *lepra* of the middle ages,) have also said, that lepra was only seen in some of the southern



departments of France, whilst it is certain that in the hospitals of *La Charité*, *St. Louis* and *Les Enfants Malades*, a considerable number of individuals are every year seen labouring under this form of squamous inflammation, which I have also encountered in all classes of society. Almost all that has appeared of late in France on the origin, propagation and disappearance of *lepra* in different quarters of the globe, has been advanced upon the strength of statements borrowed from writers who have confounded *lepra* with Greek or Arabian elephantiasis, or with other diseases not less distinct. (a)

The causes of *lepra* are for the most part very obscure, or altogether inappreciable. The disease is not contagious; patients labouring under it are not kept isolated in our hospitals, and husband and wife continue to cohabit without the one infecting the other. Like several other diseases of the skin, whose term of duration is much shorter (*roseola*, *urticaria*, &c.), *lepra* appears to be occasionally produced by the abuse, and even by the simple use of stimulating food and spirituous liquors. Bateman was acquainted with an individual in whom spiced food and a small quantity of spirits never failed to produce the disease. In the same way, it has been known to follow the ingestion of different poisonous substances, the salts of copper, for instance, and the abuse of acids. It has now and then appeared to be induced by the habitual use of game, salted and highly-seasoned food, fish, shell fish, &c., or to be engendered by the united influence of affliction and poverty. Willan was of opinion that *lepra* was principally caused by exposure to cold and moisture, and by the action of certain dry and powdery substances upon the skin: but Bateman has remarked, with justice, that bakers, and persons employed in dusty workshops are rarely affected with this disease, whilst it is frequently observed among females, and those classes of society in which personal cleanliness is an object of the most particular attention. In some cases, *lepra* has been seen occurring after violent and long-continued exercise. Many instances of hereditary *lepra* have been recorded. To recapitulate, it is impossible not to perceive that much obscurity still remains in regard to the number and nature of the causes capable of producing this disease.

678. *Diagnosis*.—The diagnosis of *lepra*, even at the present day, remains one of the most important points of its history, on account of the confusion at which I have hinted; and yet it is indisputably one of the diseases of the skin whose characters are the most remarkable. In many particulars it differs from all the chronic inflammatory affections of the skin, even from those that show themselves like it under the squamous form. In psoriasis the epidermis is, indeed, as in *lepra*, more or less rough, scaly in a greater or less degree; but the form of the squamous patches is much less regular, their edges are less raised, inflamed in a minor degree, and their contour is by no means so pre-

(a) Dr. Green (*A Practical Compendium of the Diseases of the Skin*, &c.) in confirmation of the opinion of Mr. J. Wilson in the text, says:—"Few are aware how very commonly scaly leprosy prevails in London; those who are affected with it, and indeed with any cutaneous affection, generally concealing the circumstance even from their most intimate friends, as if there were something disgraceful attached to this class of complaints. Individuals in every class of society are, however, subject to most of these, and to *lepra* in particular. The disease I find one of every-day occurrence, and by no means so intractable as I used at first to believe it, or as is supposed. Most slight cases will get well readily under the use of the sulphur fumigations, assisted by very gentle medicines; others require greater perseverance, and the administration of medicines of a more active kind, among the number of which I believe the preparations of arsenic to deserve the preference. I never had but three cases of leprosy, which, by their obstinacy disheartened both myself and patients; one was that of a gentleman who took the sulphur fume bath upwards of a hundred times, without deriving much or any permanent good from it. Another gentleman, after a trial to the same extent of this means, and a similar result, went to India, and I heard no more of him. The third is a medical gentleman, who has had the disease from puberty, and is now fifty years of age. He too has taken more than a hundred fumigations, though very irregularly, and considers himself incurable of the disease in question; otherwise he is in fair health."

cisely circular as that of the patches of *lepra*. Lastly, in inveterate psoriasis, the skin beneath the scaly patches is frequently traversed by deep fissures, and is in general much more sensitive and irritable than in *lepra*. Still there exists one variety of psoriasis, the psor. *guttata*, which has so many and such great analogies to *lepra*, that it constitutes, as it were, a form of disease intermediate between this affection and the other varieties of psoriasis. The scaly patches of psoriasis *guttata* are in fact isolated and distinct like those of *lepra*, but they are smaller in size, being rarely more than two or three lines in diameter, and their circumference is less regular and less prominent.

In some inveterate cases of *lepra*, even when the orbicular patches are blended together by their corresponding edges, it is still possible to distinguish the disease from certain psoriasis; with a little attention, a few halves or quarters of circles may be distinguished projecting from the circumference, or in the midst of the agglomerated patches.

Certain circumscribed lichens which get well from the centre towards the circumference of the patches are also to be carefully distinguished from *lepra*, the arcs of whose patches, always redder, more prominent, and more regularly defined on their convex edges, never exhibit true papulæ on their surface.

Syphilitic tubercles of a flattened form and arranged exactly side by side, so as to form perfect circles in the centre of which the skin is occasionally healthy, might be taken at the first glance for large rings of *lepra vulgaris* on the way to recovery; but mistake becomes impossible when it is seen that the squamæ, when any occur on the tubercles, do not form a continuous circle; they are thin hard lamellæ, always of smaller size than the induration on whose summit they are fixed.

The dryness and roughness of the skin, so remarkable in *lepra*, are not perceived in squamous syphilis, the thin and grayish squamæ of which, when they are old, crown small copper-coloured elevations, and are almost as soft to the touch and as pliant as the other parts of the skin. Further, the blotches that occur after a syphilitic infection usually grow pale and get well under the influence of mercurial medicines; their disappearance, moreover, is attended with this peculiarity, that they generally begin to heal off from the circumference, whilst the orbicular patches of *lepra* recover from the centre towards the circumference.

Psoriasis and pityriasis of the hairy scalp present disseminated furfuraceous squamæ, not scaly patches with regularly circumscribed edges. It might be thought difficult to confound the squamæ of *lepra* with the crusts formed by the desiccation of the fluids excreted from surfaces affected with vesicular and pustular inflammations: yet Willan observes that *lepra* has occasionally been mistaken for *impetigo figurata* vel *annularis*, or rather for the scaly state of the skin consecutive to the fall of their incrustations.

*Lepra* has been confounded with ichthyosis by Plenck and Chia-rugi. After the middle ages the title of *lepra* was often given to two diseases as different as possible from the one we are more immediately engaged in describing,—Greek elephantiasis and Arabian elephantiasis.

Leprous patches that have been freed from squamæ by the action of baths, lotions and unguents, are more difficult of distinction; it is, however, generally sufficient to question the patients narrowly, to discover that the circular red patches, healed up or not in their centres, and the red rings and half rings, that appear upon the skin, were originally covered with squamæ; besides they speedily again become crusted with scales when left to themselves.

679. *Prognosis*.—Among the aged, *lepra* is almost always incurable, or at least is so rarely cured completely that it is often advisable not to persevere too long in endeavours to obtain such a consummation. The disease seldom gets well spontaneously; it almost always proves very rebellious to every kind of treatment; the patches often follow each other in succession on one region, whilst they disappear on another. The hereditary forms of the disease are the most obstinate of any. The disease never degenerates into cancer, as has been affirmed by several authors.

680. *Treatment*.—An infinite number of remedial measures have been proposed in reference to *lepra*. These means are observed to act much more powerfully in summer than at any other season. I have



seen a certain number of cases of lepra, in which the eruption made its appearance during the autumn, to vanish spontaneously with the following spring.

Individuals whose constitution has been severely tried or broken, as well as those who show symptoms of plethora, require to undergo some preparation, directed with a view to bringing the system into a state more favourable to the success of the treatment: it may be commenced at once when the habit of the patient presents no peculiar indication.

1st. *External remedies.*—When lepra is of recent date, and extends over a large surface of the body, when the patches are affected with a painful pruritus, and the motions of the joints are impeded, the disease will be aggravated by sea bathing, by frictions or lotions with the preparations of sulphur, &c., which have been far too indiscriminately recommended in the treatment of diseases of the skin: blood-letting, on the contrary, and anointing the parts affected with cream, fresh butter, or sweet lard, give speedy relief. The vapour-bath, and the emollient or gelatinous bath may be employed as a principal or accessory means. The simple vapour-bath, occasionally proves sufficient of itself to cure recent lepra.

When the squamous patches are but very slightly inflamed, or of old standing, recourse is usually had to topical applications of a more or less exciting kind; before using these, however, it is always proper to cleanse the skin by means of fomentations, the tepid-bath, and gentle frictions, in case the scales adhere very firmly or lie in very thick layers. The use of stimulating washes, such as those composed of a mixture of spirits and water, or a solution of the sulphuret of potash, favours the removal of the scales, and often gives a favourable tendency to the progress of the patches. When the squamæ are detached, a little of the white pitch, tar, or weak nitrate of mercury ointment, may be rubbed over the affected parts, before the patient retires to rest for the night; next morning the skin must be washed with tepid water, or a weak saponaceous solution. By means of these topical applications, continued for several months, we occasionally succeed in restoring its natural texture to the skin, even after a course of internal medicines had been tried and failed. I have, however, obtained a still greater number of cures by the inunction of an ointment of the white precipitate, a drachm of white precipitate to an ounce of hog's lard; a drachm or even a drachm and a half of this mixture may be rubbed in every day without any risk of exciting salivation; this is the external application I am in the habit of prescribing in the greater number of cases of lepra.

Sulphureous water baths and fomentations are often successfully employed under similar circumstances. The waters of Barèges, Cauterets, Bagnères, Bagnoles, Enghien, &c., in France, and those of Bath, Harrowgate, Leamington, Crofton, &c., in England, are frequently recommended. The sulphur vapour-bath generally fails to do any good, although its virtues have been often extolled; a certain number of complete cures have nevertheless been obtained by this means. The acid vapour-bath, the natural or artificial sea-water-bath, the alkaline bath, and the waters of Plombières have been employed with greater success. The sea-water-bath, especially, is much recommended in England, and it occasionally produces so much excitement of the skin, that it is found necessary to dilute the sea with river water. The simple vapour bath, commonly recommended with the view of freeing the skin from squamæ, is frequently found to modify the state of the surface advantageously. The tepid-bath is also effectual in removing squamæ and in keeping the skin clean.

When leprous patches are few in number, and of very old standing, they are sometimes successfully treated by the repeated application of small blisters, and by the use of superficial escharotics, such as dilute muriatic acid, or the acid nitrate of mercury.<sup>1</sup> Some inconclusive trials have been made of the acetate and phosphate of mercury, and of the sulphate and deutoxide of antimony, in lepra; more evidently good effects have followed the application of the iodide of sulphur, in the proportion of twelve grains to the ounce of lard. It is frequently only after numerous trials, that the application best suited

to the particular case can be ascertained. My own practice is to begin with the white precipitate ointment, or with that of the proto-chloride of mercury, unless in those cases where the disease is of very long standing, when I try the iodide of sulphur in preference.

2d. *Internal remedies.*—The decoction of dulcamara in the proportion of half, and then a whole ounce, and even of two ounces to the pint of water, has been recommended by many practitioners, and more particularly by Dr. Crichton, as very efficacious in lepra. I have prescribed it several times with success; but I have seen this medicine, when given in somewhat large doses, produce vertigo, without, in every instance, appearing to exert any very sensible influence on this squamous inflammation of the skin. The extract of dulcamara is much less energetic in its action than the decoction. The dulcamara may succeed in the slighter cases of lepra, affecting young and healthily constituted individuals. I am in the habit of using the white precipitate ointment externally, at the same time that the dulcamara is taken internally.

Cases of lepra, which had resisted every other medicinal means attempted, have been cured in the course of six weeks, by the exhibition of purgatives, combined with the tepid or vapour-bath. Calomel combined with jalap or rhubarb, so as to produce one or two liquid evacuations daily, appears to be the form of purgative best adapted to these peculiar cases; when taken alone, calomel is apt to be absorbed into the system, and to cause pyalism. In some cases of obstinate lepra, and in robust individuals, I have had recourse to purgatives of a more active description.

The tincture of cantharides, administered internally in some mucilaginous drink, in doses gradually increased from five to ten, fifteen, twenty or thirty drops, occasionally causes the rapid disappearance of lepra, especially when the disease is of limited extent, and not very severe in its character. This medicine has been carried the length of sixty and even eighty drops, due regard being had to the state of the digestive organs; such doses of course require to be very prudently administered; but of all the energetic and dangerous remedies that have been used in the treatment of lepra, the tincture of cantharides is, perhaps, that which has the most remarkable influence on the disease. The great objection to its employment is its liability to excite inflammation in the digestive organs and urinary passages, especially among females, which necessitates the immediate suspension, and occasionally even the entire abandonment of the medicine.

When lepra is of long standing and extensive, and has been fruitlessly treated in a variety of ways, we must then either be content to pursue palliative measures, regulate the diet, &c., or else resort to arsenical preparations, as the state of the general health, and the knowledge we possess of the diseases the patient has already laboured under, may incline us. As lepra, however, exerts no evident ill effects on the constitution, and the inconvenience it occasions being either extremely trifling or very endurable, it will probably be found advisable in the majority of instances to confine the treatment to that which is merely palliative, unless the patient positively insists on some more active system being followed. In the latter case, the use of Fowler's arsenical solution may be begun in doses of four or five drops daily, and the quantity gradually increased to fifteen drops, to be taken at four different times in the course of the four-and-twenty hours, and continued for several months. Some practitioners have not scrupled to carry this medicine the length of fifty and sixty drops daily. I have already quoted several cases, from the works of Girdlestone, Willan, Bateman, Plumbe, and others, which demonstrate the excellent effects of this medicine in lepra. (§ 188.) I have myself obtained similar good effects in many cases; but I have often, also, in spite of all my care to graduate the doses of the medicine, seen it excite great disturbance in the functions of digestion; it therefore requires to be administered with the greatest caution; and if, after being taken for a few days, patients begin to complain of a feeling of tension, of stiffness and puffing in the face, and of heat and prickling in the throat, these phenomena, even when unaccompanied with evident derangement of the functions of the stomach, proclaim that the medicine has been given in too large doses, and warn us that these must be diminished. If, in addition, the tongue become red on its tip and edges, if thirst be complained of, the features look slightly erythematous, and the secretion of saliva be augmented, the further

<sup>1</sup> Instead of applying caustics directly to the affected parts, I have been assured, in conversation with a gentleman whose name is unknown to me, that if the nitrate of silver be applied circularly around the leprous spots, they very speedily disappear.—R. W.



use of the arsenical solution must be immediately suspended. Lastly, the medicine must be entirely abandoned if such symptoms as nausea, vomiting and vertigo, accompanied with cough and pain in the epigastrium, supervene. All these unpleasant phenomena usually subside upon the mere suspension of the arsenical solution, without our being obliged to combat them by blood-letting, which may, however, become necessary. The less active arsenical solutions of Valangin, Pearson and Lefèvre, and the arsenical pills of the Edinburgh pharmacopœia, have the same advantages and inconveniences as the common Fowler's solution, and require the same watching and the same reserve in their administration.

The pertinacity of lepra, its resistance to the most active remedial means, and the hope of substituting for these other medicines more certain in their effects or less dangerous at least in their action, have given rise to an infinity of experiments, the results of which I shall now endeavour to recapitulate.

Tar, in the dose of eight, ten or twelve grains and more, and terebinthinate pills, in doses of fifteen, twenty-four and thirty-six grains, have been tried in lepra, with very various and very uncertain results.

The sulphuret, and other preparations of *antimony*, have occasionally appeared to produce an improvement in the state of the skin, but never any remarkable cure of this disease.

The advantages of *mercurial* medicines have been exaggerated, particularly by Wilson. A watery or spirituous solution of the sublimate in minute doses, is of all these preparations that whose efficacy is the least subject to dispute. Calomel, in purgative doses, as has already been said, is often useful in lepra *vulgaris*; but it so readily excites salivation, that its action requires to be narrowly watched.

The decoction of *daphne mezereum*, employed by Pearson in several cases of lepra, frequently produces a temporary improvement, never a complete cure; its effects, however, are more apparent than those of *sarsaparilla*. The *daphne mezereum* may excite vomiting, hypercatharsis, and inflammation of the stomach and pharynx. The medicine is less energetic under the form of a syrup; some practitioners are in the habit of prescribing it in combination with arsenical preparations.

The *liquor potassæ* of the Berlin pharmacopœia in doses of from twenty to thirty drops; the watery extract of *white hellebore* in doses of from two to four grains; various preparations of the *ranunculi*, of the *rhûs radicans*, and *rhûs toxicodendron*, have occasionally proved of signal advantage in lepra, when the disease was extensive, and attended with high inflammation, but unaccompanied with notable derangement among the digestive functions. The effects of such medicines, of course, require to be carefully watched.

Experiments, made subsequently to those of Dr. Lettsom, are far from confirming the benefits he believed he had derived from the decoction of the bark of the *ulmus pyramidalis*, a medicine of a much less formidable character than any of those just signalized. Much still remains to be done in regard to the treatment of lepra. A quiet and regular life, a diet of white meats, fresh vegetables, ripe and watery fruits, milk, &c., assist the action of the different medicines I have mentioned, all of which we are often obliged to try, one after another, in a disease so obstinate in its characters. (a)

(a) Plumbe lays great and deserved stress on the dependence of lepra on constitutional causes; but as urgent are some, at least, of his predecessors in saying that this origin and connection have been much overlooked. Alibert I might cite, among others, as pointing out expressly, in some of his cases, the occurrence of the disease after strong mental emotions, and particularly fear and anxiety. This author gives the history of a patient at the St. Louis Hospital, who unexpectedly saw his former master, a member of the Parliament of Paris, dragged to the scaffold, during the horrors of the Revolution; and who was so terrified at the sight, that a furfuraceous eruption broke out suddenly on the whole cutaneous surface. This affection assumed the true character of lepra, or, as Alibert termed it, *dartre furfuracée*. In another case, described by him, the disease originated from depression of spirits, caused by the imprisonment of a friend, and increased afterwards by a loss of the situation which he himself held. Biett also assigns mental affections as one of the most common causes.

The class of persons, says Plumbe, who appear to be most subject

### Historical Notices and particular Cases.

681. The word *lepra* is nowhere well defined in the collection of the Hippocratic writings.<sup>1</sup> It, however, occurs in a less vague accep-

to lepra, are those minds that are anxiously occupied by the cares of business or study, or who are accustomed to bodily exertion beyond what their strength enables them to bear. He is too exclusive in his opinion, that lepra is always caused by debility either direct or indirect, and requires uniformly nutritive and stimulating diet. In his general proposition, however, we can all join, viz., that attention to the general health, and the invigoration of the constitution, are the chief means by which the cure is brought about.

As respects a more specific cause in certain venereal indulgences, the observations of Plumbe merit serious attention. "If any fact were necessary," he tells us, "in addition to those I have adduced, that debility of circulation and system were the causes of lepra, I might allege that in young men, as confessed to me often, the practice of masturbation has been followed, and that to a very great extent, in the very worst cases which have come under my notice." He adds "the lepers of whom we read, therefore, as excommunicated from their species, and remarkable for their disgusting salaciousness, have been probably the victims of the vice alluded to—the effect has been mistaken for the cause."

On the score of *treatment* of lepra, little essentially new can be added to the conditions and details so well laid down in the text. A preference is indicated by M. Rayer for the iodide of sulphur among the external remedies. It is the favourite one of M. Biett in several diseases of the skin, including lepra. The proportion of the iodide may be increased from 12 to 30 grains to the ounce of lard. M. Biett has also used with marked success, the iodide of ammonium in the proportion of ʒs to ʒss with ʒi of adeps; the weaker ointment being used when the disease is recent, and the stronger when it is chronic. As the iodide is decomposed by exposure to the air, the ointment should be kept in stopped bottles. For details, as to the mode of employing this preparation and on the treatment generally of lepra and psoriasis, illustrated by cases, the reader is referred to an instructive paper by Dr. Pennock in the *American Journal of the Medical Sciences*, vol. xv. M. Gibert speaks favourably of the ointments of anthracokali and foligokali, two new medicines of whose use mention has been more fully made in a note at pp. 201–2 of this work.

"M. Lemery, of St. Louis, has lately recalled the attention of practitioners to an old, but valuable application, in leprous affections—namely *tar*. Finding, however, that this remedy was objectionable on account of its colour and odour, he had recourse to one of the products of tar, *concrete naphthaline*, which afforded him the most successful results. The preparation which he employs is an ointment, composed of

Naphthaline two to four parts.

Lard thirty parts.

M.

This he applies to the diseased skin, on folds of linen, night and morning. The ointment is highly stimulating, and has a powerful smell, which quickly passes away. By means of the naphthaline ointment, M. Lemery succeeded in curing eight patients out of fourteen, in from five weeks to three months."

Dr. A. T. Thomson (*Commentaries on Diseases of the Skin*), Wilson states that he has found no combination of mercury equal to that with iodine, in the treatment of lepra. "The biniodide, in doses of a sixth to a fourth of a grain, seems to exert almost a specific influence upon the morbid state of the skin; and when given at the same time as the iodide of arsenic, and aided by blood-letting, it has rarely failed in rapidly and permanently curing the most inveterate cases of the disease. As the acrimony of the preparation has sometimes greatly disturbed the alimentary canal, I have usually combined it, either with opium or conium, and I have always carefully avoided pushing it to pyalism. Candour obliges me to admit, that as I have usually prescribed the biniodide in conjunction with the iodide of arsenic, it

<sup>1</sup> De affectibus. Intérp. Van der Linden, tom. 11, p. 182.—Prorrh. l. 11, pp. 521 et 522.



tation in the *Isagoge*, which is ascribed to Galen.<sup>1</sup> The definition of Paulus Ægineta is more precise.<sup>2</sup> Subsequently, the title

is difficult to say what share the mercurial had in the cures; and, in cases where idiosyncrasy prevented me from employing arsenicals in any form, I have seen the beneficial properties of the biniodide very obviously displayed."

The preparation of arsenic, which is preferred by Dr. Thomson, is the iodide in a dose at first of a tenth of a grain; but in no instance to be increased beyond the third of a grain. Heat of the mouth and fauces, and anxiety at the præcordia with pain at the epigastrium or griping, will indicate a necessity for reducing the dose; and if nausea, cough or salivation supervenes, it should be left off altogether. Iodide of arsenic is incompatible with cinchonia in any form.

Donovan's solution, the triple compound of iodine, arsenic and mercury, has been given with success in lepra, pityriasis and psoriasis. The commonly prescribed dose of half a drachm, is larger than it will be prudent to begin with, in most cases. I prefer the dose of five drops, gradually increased to twenty, twice a day; in some cases even this latter cannot be reached without the patient suffering from nausea and gastric distress. Dr. Graves has, however, administered it to the extent of half a drachm four times a day, for two months with but two interruptions; and Sir Henry Marsh carried it, in the case of a boy twelve years of age, to the extent of half an ounce daily, in divided doses, which only produced very small insalvation.

Mr. Erichsen's remarks (*Med. Gazette*, 1843) on the employment of arsenic in squamous affections of the skin are so clear, and clinically valuable, that I have no hesitation in repeating them on the present occasion.

"Useful, however, as arsenic may be in many diseases of the skin, it is in the treatment of the squamous affections, more particularly of long-standing cases of *lepra* and of inveterate *psoriasis*, that it is incontestably of the greatest service. For it is by no means rare to meet with cases of these diseases, which, obstinately resisting, perhaps for years, milder methods of treatment, will, in the course of a few weeks, yield to the judicious employment of the preparations of this metal, the utility of which in this class of affections is so fully established by most dermatologists, that it is almost needless to insist upon it. It was, indeed, the success that attended the employment of arsenic in the squamous diseases that first led to its introduction into practice as a most valuable remedy in other affections of the skin. But, notwithstanding its utility in this class of diseases (the squamous), it is not admissible in every stage of their progress, nor indeed is it required in the great majority of these cases; far from it; it is only in very extensive and obstinately rebellious forms of these complaints, or when the patient is suffering some very positive inconvenience from the disease, that we should be justified in administering it, and then only in the absence of those circumstances that have already been pointed out as contra-indicating the administration of arsenic in other affections.

"With regard to the stage of *lepra* and *psoriasis* in which the preparations of this metal may be administered, it should be laid down as a rule that they should not be given until the disease had assumed a decidedly chronic, inactive character. So long, indeed, as there is any inflammatory redness, heat, or irritation about the patches, they should never, under any circumstances, be employed, as the stimulus of the arsenic would almost infallibly augment the severity of the disease; besides, during the earlier periods of the complaint, we should probably be able to effect a cure by other and less heroic measures. It is only, then, in very long standing cases of an extensive and indolent squamous disease, in which all other means of treatment that are likely to benefit have been employed without success, that these remedies should be given. And even then, as Rayer justly remarks, as these diseases frequently exert no evident ill effects on the constitution, the inconvenience they occasion being but very trifling, it will be advisable to confine the treatment to a palliative one, unless the patient positively insist on some active measures being adopted, when we should not hesitate to have recourse

*lepra* was given to every disease of the skin, distinguished by a hideous and disgusting appearance, and particularly to the Greek elephantiasis. Willan was the first who restored to the term its original meaning; he has also given good figures, and a very accurate description of the disease which the word was originally used to designate.<sup>3</sup> Bateman has faithfully copied Willan's account of the disease in his *Synopsis*. Dr. Falconer<sup>4</sup> has included impetigo in his account of *lepra*. The remarks of Levacher Lafautrie<sup>5</sup> appear to bear upon a complication of *lepra* with pellagra. Römer and Carminati have published observations in favour of lizard and viper broths (§ 114). Galès, Clarke, and Willan quote several cases of *lepra*, cured by sulphur fumigations (§ 128). Carrère, Crichton, Razon, and Bertrand-Lagrèsie have extolled the *dulcamara* (§ 202). Girdlestone, Willan, Bateman, Duffin,<sup>6</sup> and many others, have particularly recommended arsenical preparations (§ 188). Various cases and observations have been published in different periodical works,<sup>7</sup> and in the dissertations of Bonorden, and of Meckel.<sup>8</sup> Alibert has treated of *lepra*, in his large work, under the title of *dartre squameuse orbiculée*.

CASE CIX.—*Lepra; blood-letting, baths and purgatives.* D \* \* \*, aged twenty-one, sprung of healthy parents, had laboured under *lepra* for two months, when he came to consult me on the 3d of May, 1826. The disease had begun in the shape of small circular scaly

to the employment of the arsenicals, due attention being paid to the temperament of the individual, and to the state of his digestive organs.

"In the majority of cases of *lepra* or *psoriasis*, Fowler's solution will, I think, be found the most useful preparation of arsenic that we can employ. The liquor of the hydriodate of arsenic and mercury has been very successfully exhibited in cases of this description, as has also the iodide of arsenic, either alone, or, if the disease be of a syphilitic nature, in combination with the biniodide of mercury and extract of conium. Instances illustrative of the value of these preparations have been adduced in a former part of this paper. The 'Asiatic pills' were strongly recommended, and, according to Cazenave and Schedel, employed by Bielt with advantage, in cases of *psoriasis inveterata*: they are, however, open to the objection of being less manageable than the other preparations of arsenic.

"When these remedies are about to exercise a beneficial influence in cases of *lepra* and *psoriasis*, it will be observed that an increased action appears to take place in the diseased cutis, which becomes red, inflamed, and irritable; the scaly patches then appear to heal up, either from the centre or the circumference, according to the nature of the affection, whether it be *lepra* or *psoriasis*, and eventually fall off, leaving the subjacent skin red, smooth, shining, and covered by thin epidermic exfoliations, which may usually be readily cleared off by stimulating topical applications, such as the ointments of tar, or of the nitrate or the biniodide of mercury; after which nothing but a red stain will be left in the site of the squamous patch. And this will soon disappear if the remedies be persevered in, which they should always be, until this blotch is entirely and effectually removed; for, until this be accomplished, the disease will be very liable to return: indeed, it is from a want of due attention to this very important circumstance, that the arsenical preparations have been so often accused of affecting merely temporary cures. We must not be content with removing the scales merely, which are secondary phenomena, but we must get rid of the primary lesion, that peculiar inflammatory or congested state of the blood-vessels of the cutis, which, by giving rise to an increased and morbid secretion of the epidermis, is the proximate cause of the scaly diseases."

Mr. Plumbe states, that *dulcamara* has unfortunately failed in his hands, and Mr. Phillips' testimony is scarcely more favourable.

<sup>3</sup> On cutaneous disorders, 4to. Art. *Lepra*.

<sup>4</sup> An account of the *lepra græcorum*. (Memoirs of the Medic. Society of London, vol. iii. p. 369.)

<sup>5</sup> Observations d'une affection lichénieuse de la peau très fréquente dans la campagne de Milan. (Mém. de la soc. médic. d'émulation, année vi. p. 282.)

<sup>6</sup> Duffin (L. W.). Of squamous disorders. (Edinb. Med. and Surg. Journal, January, 1826.)

<sup>7</sup> Journal hebdomadaire, t. iv. p. 299; t. vii. p. 434; t. viii. p. 44.—*Jancetté méd.*, 1831, t. v. p. 9, p. 42.—*Lond. Med. Gazette*, t. iii. p. 487; t. viii. p. 30.

<sup>8</sup> Bonorden. De *lepra squamosa*. Halæ, 1795.—Meckel. De *lepra squamosa*. Halæ, 1795.

<sup>1</sup> *Isagoge*, p. 94.

<sup>2</sup> *Δεπτα* per profunditatem corporum autem depascitur, orbiculatiori modo, et squamas piscium squamis similes dimittit. He even adds the characters which distinguish it from *psoriasis*: "*Λεπρα* autem magis in superficie hæret et variè figurata est" (lib. v. cap. 2, de *lepra* et *psoriâ*).



patches on the knee and elbow, and subsequently spread to other parts of the body.

May 3d.—The patches on the knee, eleven in number, were generally circular in shape, and from six to nine lines in diameter; their centres were depressed, covered with thick, hirsute squamæ, and intersected with fine linear fissures; their circumferences were in strong relief with the neighbouring skin. On the leg and thigh a number of squamous patches, circular like the former, but of smaller size, and with centres less depressed, and edges less raised, were conspicuous; these patches, in a word, bore the strongest resemblance to those of psoriasis *guttata*. Interspersed among the squamous patches, several small, solid elevations, the size of a millet-seed, were perceived, the summits of some of which were red; those of others were covered with a small white scale, whilst others were transformed into squamous patches, so that the successive stages of the disease could be readily traced. On the upper extremities, the same gradations in the progress of the patches were conspicuous; those first formed on the elbows being the largest. On the trunk, the patches were few in number, and only occurred on the lumbar region. The patches on the extremities were the seat of a very violent pruritus, when the heat of the surface happened to be increased by any accidental circumstance. In other respects, D \* \* \* was in perfect health. I bled him from the arm to the extent of six ounces, and he took a tepid-bath every other day. The bleeding was followed by a great abatement of the pruritus; and several of the most recently-formed patches became pale, and shrunk in appearance. The venesection was repeated after the lapse of a fortnight, and the baths were continued; I afterwards recommended leeches to be several times applied in the vicinity of the patches that looked most inflamed. In this way I brought about a great diminution in the number and dimensions of the patches, which, for the most part, were now changed into true rings, the integument in their centre having become perfectly healthy. Several doses of purgative medicine were prescribed, as a final measure, at considerable intervals from each other, and the cure was complete after three months and a half of treatment.

CASE CX.—*Lepra of the knees and elbows; blisters and escharotics.* F. B., aged twenty-eight, in other respects healthy, presented himself at the Bureau Central with a number of well-characterized leprous patches on the olecranal regions of the right and left arms, as well as on both knees, a single one on the right foot, and two of small size on the cartilage of the right ear. The disease was of four months' standing, and the patches were scarcely at all inflamed. Within the space of eighteen days, six small flying blisters, the size of the patches upon the olecranal regions, were applied to their surface. The patches of the knee and ear were cauterized with the hydrochloric acid, and this measure had to be repeated many times on several of them. The acid acted so deeply that it left the mark of two circular cicatrices which still proclaim the forms and dimensions of the patches.

CASE CXI.—*Lepra of the scalp; white precipitate salve.* J. V \* \* \*, aged twenty-three, entered the La Charité Hospital on the 17th October, 1833. This young woman was fat and ruddy, and in general good health. In the course of the previous month of May, a number of solid elevations suddenly made their appearance on the scalp. These soon became covered with thin, dry scales, without causing pruritus or smarting. Suffering little inconvenience from this affection, the patient at first tried no means to get rid of it; more lately, however, she had made use of a tisan of saponaria, bathed the parts affected with salt and water, and applied a blister to her neck, but without deriving any benefit from the treatment.

On entering the hospital, the surface of the scalp presented a great number of circular squamous patches varying from half an inch to an inch in diameter, distinctly circumscribed, and of a yellowish colour. These were covered by an agglomeration of small scales, which appeared to be attached to the scalp by one of their extremities, and to lie one over the other. The squamæ did not adhere at all firmly, a little rubbing detached them readily; the integument under them was rosy and dry; on several other places large papular-looking elevations were perceived; the hair had fallen off from some of the patches over others it was finer and thinner than on other parts of the head. On the integument in front of the left ear, two patches occurred; one of them, the size of a shilling, was covered around its circumference

with fine dry white squamæ, whilst its centre was without them, but dry, red, and discoloured. There was no discharge from any part of the affected skin. The patient complained from time to time of a slight degree of smarting in the affected parts. The whole of the rest of the body was free from all trace of any similar affection. The patient was directed to rub a drachm of the white precipitate ointment over the surface of the scalp daily, the hair having been previously clipped short. By this means the squamæ were all removed in the course of three or four days; and those that were formed afresh were white and fine, and only apparent around the circumference of the patches. October 22d.—Four drops of the tincture of cantharides were now prescribed in a mucilaginous mixture. 24th.—Headache, for which bleeding was deemed necessary; five drops of the tinct. cantharid. 25th.—Symptoms of inflammation in the vein which had been opened; twenty-five leeches, and a poultice to the part; the arm to be twice put into a tepid bath. 26th.—The same number of leeches as before, applied to the bend of the arm, gave relief. The tinct. canthar. had been continued in doses of five drops daily, but the patient now complaining of pain and scalding in making water, the further use of the medicine was suspended. The lepra continued to advance nevertheless towards recovery. Squamæ were now only formed here and there, and the colour of the patches was getting daily less and less vivid. A few tepid baths, and the renewed application of the white precipitate salve completed the cure, so that the patient left the hospital on the 10th of December, quite recovered. (a)

(a) *Cases of lepra vulgaris—Sulphur vapour bath, bleeding, and Fowler's solution.*

"A lady, aged twenty-five, came to consult me in the beginning of April, 1832, on account of leprosy, under which she had laboured for the last seven years. When she applied to me, the disease was not confined to any particular region, but extended over the whole of the body, with the exception of the hands, feet, and face. The head had been shaved regularly once a fortnight during the last three years, for the convenience of making applications to the spots. The squamous patches, on the body and limbs, varied in size from that of a crown piece to that of a sixpence; they were all of a very regular round shape, though some of them had run together in different places, and formed broad continuous patches. The edges of the several patches were of a more vivid red, and appeared more raised than their centres, which, for the most part, were covered with thin scales, constantly falling off, but as constantly reproduced. Several of the spots, however, were declining, and presented nearly the same pale colour as the skin at large; the red raised edges which surrounded these, formed simple rings, enclosing patches of apparently healthy integument. Other spots again were on the increase, and appeared as small red elevations, covered with a thin shining scale of similar dimensions. The patient informed me that this process of decline in one part, and of increase in another, had been constantly going on for rather more than the last seven years.

"The patient was otherwise in good health, complaining of nothing except a proneness to occasional headache. She had made trial of all the usual remedial means prescribed in cases of scaly leprosy without success, with the single exception of the sulphur fume baths; and it was with the view of trying the effect of these that I was now consulted.

"This patient began by taking three vapour baths, in order to free the surface in some degree from the thick covering of scales spread over it, and a few doses of aperient medicine as preparatory measures. The sulphur fume baths were only commenced on the 17th of April, one being taken every other day. But the disease was still in too active a state to be benefited by this treatment; in a week, the patient was literally of a uniform and bright scarlet red colour, and very many new spots were brought out, to which her attention was directed. She therefore ceased to take the baths till the 30th, when she again commenced them. By this time, the general redness had disappeared, but the leprous spots were much in the same state as before. May 10th.—The new spots had not maintained the character of the former ones, not having gone on gradually extending, and many of them having even receded entirely. The baths were now taken daily; but



## PSORIASIS.

Vocab. *Dartre, Psoriasis, Scall, Itch* [Dry Scaly Tetter, &c.].

682. Psoriasis is a chronic inflammation of the skin, limited to a single region of the body, or occupying almost its entire surface, appearing primarily under the form of solid elevations, which change

up to the 20th of May, so little progress has been made in the cure, that I bled the patient to fourteen ounces. The blood was natural, but firm in texture.

"30th.—A great improvement had taken place since the bleeding, many of the spots having disappeared, and left red rings, some of which were broken through in different places, the skin in the gaps presenting its natural appearance. June 9th.—Improved, though not to so great an extent as during the interval up to last report. Few entire red patches remained, but the old rings had undergone little variation. To these, with a camel's hair pencil, the patient was directed to apply a little diluted aromatic vinegar every night, and she commenced taking four drops of the arsenical solution, morning and evening, in a cup of barley-water. 19th.—The patient began to complain of a troublesome itchiness of the skin, which very usually occurs in consequence of the excitement occasioned by the heat of the bath and the effects of the sulphur; this, however, did not deter her from continuing the fumigation till the 24th, when the pruritus was so much increased, that they were discontinued for a few days. Having suffered from pains and uneasy sensations in the stomach and bowels also, the arsenical medicine, which had been increased to ten drops twice a day, was likewise left off for a time.

"July 3d.—The patient, being now free from pain in the abdomen, and the pruritus of skin having subsided, resumed the fumigations, together with the medicine. At this date she was greatly better. 13th.—The skin had become much darkened and hardened, from the effects of the sulphur. This state I knew to be the herald of the process of peeling or desquamation which always follows the continued use of the sulphur fume bath, and from which I anticipated the best effects in this case; I therefore advised the sulphur bath to be discontinued for six weeks; and to facilitate the peeling of the skin, I recommended a few water baths, and now and then a vapour bath, to be taken, whilst the arsenical solution was steadily persevered in, so long as no unpleasant constitutional symptoms supervened.

"I did not see this lady again until the end of September, when the whole of the leprous spots had disappeared, except two or three on the abdomen. To these she was advised to apply the aromatic vinegar as before, and still to await the result of the treatment, as desquamation of the cuticle had not yet come to an end.

"This lady visited me again in the April of 1833, with a return of her complaint, but of very trifling extent, showing itself only on the body, and consisting in all of not more than a dozen spots. She was so much convinced that the bleeding had exerted a beneficial influence in the treatment of the year before, that she had had herself bled before visiting me, with the intention of resuming the sulphur fume baths. Eighteen of these, on this occasion, removed every trace of the disease.

"This lady informed me that she had gone on *peeling* during the greater part of the winter, and had lost all vestiges of her complaint, till, on the return of spring, when, as just stated, it showed a disposition to recur.

"Since this trifling attack the patient has remained quite well. On this latter occasion, no medicine whatever was taken.

"CASE 2.—Very nearly at the same time (April, 1832) as the last patient, a lady from Ireland consulted me on the same form of squamous disease—leprosy, and it was an odd coincidence, that this lady, on comparing notes with the one whose case has been just detailed, found that they had both been assailed with the disease about the same period, and were so similarly affected, that the account of the symptoms in the one proved to be a correct detail of those in the other. It is not very usual for lepra to appear on the hairy scalp, but this latter patient, like the former, was so attacked, and had been in the habit of having her head shaved for three or four years, every ten

into squamous patches of different sizes, not depressed in the centre, and of which the edges are irregular and but slightly raised.

683. Four principal varieties of psoriasis are reckoned; these are: 1st. Psoriasis *discreta* (*guttata*, Willan). In this variety numbers of small, distinct elevations, and squamous patches, occur, from two to four lines in diameter, irregularly circumscribed, and of a form and appearance very analogous to that which results when the body is sprinkled with water and the fluid lies in large drops upon its surface; such, indeed, appears to have been the origin of the epithet employed by Willan, to distinguish this variety.

Each of the squamous patches is announced by a small solid, red elevation, the size of a pin's head, the summit of which soon gets covered with a minute dry scale of a dull white colour. These patches are irregularly rounded, slightly prominent, especially towards their centre, and separated from each other by considerable intervals of healthy skin. When the patches are freed from their investing squamæ, the corion appears red and irritable, and if the

days, or once a fortnight, for the convenience of making applications of different kinds to it. The only difference in the cases was that this second patient was twenty-nine years of age, very prone to what she described as feverish heats, and to headaches, and was further of a very constipated habit. The numerous spots and patches were in all particulars alike in both patients, who were both of strong make, and in the enjoyment of fair average health. The first lady took the sulphur fume bath fifty-one times, between the 17th of April and the 13th of July, before the complaint disappeared, and she had a slight return of it the following year. The latter lady had forty-seven fumigations administered, between the 20th of April and the 23d of June, when it was judged unnecessary to continue them longer. After the process of peeling was completed, this lady found herself quite well, and has had no return of her malady up to the present time.

"She was bled, and took medicines similar to those prescribed in the first case, with the addition of an aperient draught most mornings, when she first commenced the use of the fume bath; aperient medicine, indeed, was required from time to time, throughout the whole course of the treatment.

"The arsenical solution, given with the usual precautions, has long and justly held a high reputation in most countries, for its influence over lepra. I am anxious, from my own experience, to attest its beneficial powers in this disease. It is not improbable but that both of the cases detailed would have recovered under the use of the sulphur fumes, without the addition of so powerful a medicine as arsenic; and, indeed, I have known many cases that have been of short standing recover without any assistance from other means, even without the use of bleeding. But in cases of longer standing, I have reason to conclude that both of these adjuncts are advisable, and tend greatly to abridge and facilitate a cure. Leprous patients perspire readily and abundantly whilst in the fumigating bath; in psoriasis, another scaly disease, I have found them to perspire less freely, and still less in general pityriasis, when the scales are much thinner, for the most part smaller, and much more continuous.

"I have selected these two cases of lepra on account of their long standing, and because I think they tend to show the powerful remedial influence possessed by the sulphur fume bath, in this peculiar and generally intractable disease. These cases I also consider as fair specimens of the utility of conjoining internal medicines with the fumigatory method; for although the latter has been upheld as adequate to cure lepra by itself, and I have known many instances of the fact, yet when we have a disease of an acknowledged rebellious character to contend with, it seems to me well to meet it with the whole of the corrective powers we possess."—*Green on Diseases of the Skin*, pp. 152–3.

<sup>1</sup> Dr. Bardsley, in his "Hospital Facts," abstains from detail relative to the medicines given when putting to the test the efficacy of fumigations in the cutaneous diseases.

Of the value of his preparatory treatment there can be no doubt, and although he speaks and his tables show so favourably in regard to the merits of the fumigatory method of treatment, I have reason either to doubt the excellence of the construction of the apparatus employed, or to judge unfavourably of the way in which the fumigations were administered, from the results as shown in the tables. Dr. Bardsley's other statements relative to the fumigatory method deserve the particular consideration of the profession.



whole have been thus cleansed, the disease appears in the shape of rounded spots, from two to four lines across, slightly prominent and of a brownish-red colour. These patches occasionally get well, like those of lepra, from the centre towards the circumference; in this case the middle of the patches presents an accidental depression, and acquires a slightly yellow tint; in proportion as the cure advances, these patches become transformed into segments or small arcs of circles, and after it is accomplished, the skin still presents small stains of a grayish brown, or yellowish cast, in those points that had been possessed by the eruption.

Psoriasis *discreta* is seldom accompanied with much pruritus, even when the body is heated by exercise or any other accidental cause.

The patches of this variety of psoriasis may be confined to the hairy scalp, face, trunk, or extremities, or be disseminated over the whole of these regions, appearing either at once upon all of them, or upon each in succession. Almost always very irregularly disseminated, the patches appear crowded in one situation, and very thinly sown in another; on the extremities they are always observed to be more numerous in the line of extension than in that of flexion. Psoriasis *discreta* makes its attacks most commonly in the spring and autumn, and occasionally disappears spontaneously during summer; it has been known to appear and disappear in this manner for several years in succession. In children it is more quickly evolved than among adults.

2d. Psoriasis *confluens* (*diffusa*, Willan). Instead of being separate and distinct, it much more frequently happens that the primary papulæ of psoriasis are evolved so close together that the squamous patches which succeed them meet and blend by their corresponding edges. As may be imagined, the patches in this instance are of very various sizes and forms. As in psoriasis *discreta*, each of the smaller patches which goes to the composition of the larger clusters, begins in the form of a solid papular-looking eminence, on the top of which a dry scale of a dull-white colour is soon formed. The patches increase in size, become confluent, and compose at length an irregular squamous surface, upon which, however, the original spots may often be distinguished. These large patches are sometimes irregularly intersected by red lines, and here and there show angular portions of integument which are free from squamæ.

Psoriasis is more constantly *confluent* on the limbs than on the trunk; and the patches characteristic of this form of the disease frequently disappear on one district at the same time that the eruption which gives rise to them makes its appearance on another.

The arrangement of the eruption of psoriasis in small distinct circular spots, or in broad confluent patches, is no evidence of diversity in the nature of the disease; it is frequently seen in the shape of psoriasis *discreta* on the body, whilst it has the character of psoriasis *confluens* on the limbs.

Patients labouring under confluent psoriasis of recent date, complain of a considerable degree of pain and pruritus in the affected parts, which is always increased by the warmth of bed, the vicinity of a fire, and any other cause that tends to stimulate, or raise the temperature of the surface.

Psoriasis *confluens* of the forearms and legs is occasionally seen forming a kind of irregular band, and sometimes, but more rarely, a sort of case which includes the affected limb through its entire length. In this instance, instead of the usual micaceous squamæ of psoriasis we occasionally only distinguish an agglomeration of minute furfuraceous scales, the colour of which approaches that of the flour of mustard. When the squamæ, in such cases, have been got rid of by baths, vapour douches, &c., the surface they covered appears smooth, shining, and highly inflamed. (a)

(a) Psoriasis *infantis*, a term applied by Willan to psoriasis *diffusa*, as it is seen in the infant, is thus described by Plumbe.

"The psoriasis of infants is entitled to a separate consideration from the foregoing, on a very important account. There is no question that it has often been mistaken for the consequence of venereal taint on the part of the parents of the child who is the subject of it, and has been, therefore, the means of inflicting much injury and undeserved distress. Dr. Willan, after alluding to one or two unimportant points, in which he states the venereal affection of the skin of infants

3d. Whether this squamous inflammation have appeared under the form of small *distinct* patches (psoriasis *discreta*), or of confluent

to differ from that under consideration, advises 'practitioners not to be too hasty in judging from mere inspection, and never to decide till they are *justified by collateral circumstances*.' It is seen in infants from birth up to three years of age.

"From a very minute and lengthened inquiry into the history of many cases of this disease, I am irresistibly led to the conclusion that it has no connection with any form of venereal disease, except indirectly, *i. e.*, when syphilitic affection may have combined with other causes in reducing the strength of the mother, or otherwise depriving the child of healthy sustenance. A generally healthy performance of the different animal functions, which is often found compatible with constitutional syphilitic disease, is not seen in the cases of infants affected with psoriasis. It is found to occur, moreover, where the parents on neither side can be liable to suspicion.

"Like the psoriasis and lepra of adults, it may continue long after its direct exciting cause has ceased to exist; and when taking place on the skin of unhealthy and poorly nourished children, it frequently continues when a better constitutional condition has been produced. From this circumstance, and the unyielding nature of the disease, it has no doubt sometimes happened that the suspicion alluded to has arisen, where, at the commencement of the eruption, it would not have been entertained; and the treatment which has been adopted under these circumstances has been improper and injurious. In an institution to which I have the honour of belonging, cases without number have come under my notice, where poverty of circumstances existed on the part of the parents in a most extreme degree, evidently operating as the cause of the disease, when from a change to better living, consequent on the parents obtaining employment, the disease has speedily disappeared. Many such cases have been considered and treated as venereal without benefit; but, on the contrary, with aggravation of all the symptoms.

"With respect to the class of society among which infants are chiefly affected with this disease, it may be safely asserted, that it is almost unknown among the rich or affluent, or even those whose circumstances bear them uniformly above the reach of want. It may sometimes occur from bad feeding or neglect, but it is generally the concomitant of poverty, and for the most part only seen in the cellars and confined apartments of the poor and unhappy, where privation of nourishing food and impurity of atmosphere unite their depressing powers.

"When the disease first comes under our notice among the poor, it is characterized by red patches of inflammation on the cheeks, chin, forehead, nates, abdomen, &c. On the face some of the patches are small and irregular, others large, and assuming somewhat of a circular form. Some are covered with a horny scale, which is glossy and smooth to the touch, but which in a few days cracks and exhibits fissures of greater or less length and depth. Some are occupied by portions of scales of morbid cuticle rapidly detaching themselves, while others are forming beneath, which take the same course. The eyes sometimes partake of the inflammation, and generally the mucous membrane of the nose becomes inflamed and thickened, leading to snuffling, difficulty of respiration, and some fluid discharge.

"In the more aggravated cases, the bottoms of the fissures emit a bloody discharge, if situated in the neighbourhood of joints, but not otherwise; and if no great emaciation may have existed at first, the irritation and pain belonging to the disease make it soon apparent, and it generally increases with rapidity till death takes place.

"The most irritable and painful spot which the disease is found to occupy is about the nates or between the legs; the perineum, labiæ, scrotum, &c., also, are not unfrequently the seats of much abrasion and tenderness, apparently produced by the stimulating properties of the urine.

"It seldom happens that if the excretions be examined, a very disordered state of the alimentary canal with the secretions of the liver be not discovered, which may have been either concerned as an original cause, or impeding the restoration of health and strength. Hence small doses of the hydr. c. cretâ, with the occasional use of a brisker purgative, are necessary. Tepid bathing, to the extent of liberating all the hard scales which may have been formed, and allay-



inasses (*psoriasis confluens*), when it has existed during many months, or several years, especially when it can be traced to a hereditary taint, or attacks individuals of shattered constitution, the disease gets worse and worse, the skin becomes hard, thickened, tense and inelastic, yielding uneasily to the motions of the limbs, and appearing to undergo a kind of hypertrophy; the primary patches of the disease are no longer distinguishable, but the integument is covered with hard, dry, and thick white scales; numerous chaps of various depths soon follow, furrowing the surface in all directions, but especially in those of the natural folds of the skin (*psoriasis inveterata* Willan, *agria* of the ancient writers); and in those rare cases in which the trunk and extremities are involved in one common incrustation, the disease assumes a hideous appearance, and the surface of the body has been compared by some pathologists to the rugged bark of an aged tree. This circumstance has even led M. Alibert to designate this last and inveterate stage of the disease, under the name of *dartre squammeuse lichenoïde*. The squamæ at this stage frequently rise in strong relief from the skin, exceeding by from a quarter to half a line the level of the neighbouring healthy parts. They are also then produced in such abundance, that quantities may always be gathered from the beds, and shaken from the clothes of patients. These squamæ are occasionally a full line in thickness. It is in the vicinity of the articulations, that chaps or cracks occur most commonly; these get deeper and deeper, bleed when motion is attempted, and often pour out a glutinous fluid that dries up into linear incrustations. Further, the parts affected are frequently the seat of a burning pruritus, especially during the night. To conclude, considerable superficial excoriations have been seen to form upon the back, buttocks and lower limbs, when these parts were the seat of this disease, which caused the patients much and extreme suffering.

4th. Under the title of *psoriasis gyrata*, Willan has described a squamous vermiform eruption, characterized by squamous bands, spirally twisted or arranged longitudinally, and traversed by numerous superficial lines, corresponding evidently to the natural folds or wrinkles of the skin. These bands, however disposed, are affected with a very slight furfuraceous desquamation. I have met with but two cases of this variety, in neither of which could I observe any thing like papulæ, or round squamous patches, analogous to those of *psoriasis discreta*. This eruption is seldom attended with pruritus, even when the temperature of the surface is increased by exercise or any other cause.

684. *Psoriasis* may continue from a few months to several years; it is always of long duration when the patches are numerous and it can be traced hereditarily.

685. Independently of the remarkable varieties presented by this disease, which have now been described, it still offers several additional peculiarities according to the regions of the body it attacks.

1st. *Psoriasis* seldom appears primarily upon the *hairy scalp*. It there usually occurs in the *distinct* form; the squamæ are always yellower and more pulverulent than when they are produced from the trunk. The *confluent* form of the disease is still rarer here. I have, however, seen it covering almost the whole surface of the hairy scalp, and extending to the forehead, in a line parallel with that of the implantation of the hair, under the form of a prominent band, an inch in breadth, whose surface was covered with rough squamæ of a dull white colour, and whose lower edge was red and much raised above the level of the healthy skin. The inflammation of *psoriasis* frequently attacks the bulbs of the hair, which is then detached from the points affected.

2d. *Psoriasis* frequently attacks *the face*, at the same time that it appears on other regions of the body; the eruption, however, may be entirely confined to the countenance. The patches that characterize the disease in this situation are red and furfuraceous, and the squamæ are usually very light and thin. The subcutaneous cellular tissue becomes tumefied when the disease is of long standing and has assumed the characters of the variety designated *inveterata*. On the

ing the general irritation of the skin; frequent ablutions with warm water of the more irritable parts, change to a purer atmosphere, and more efficient nourishment, have been in most cases adequate to the cure, when assisted by internal remedies of this nature."

eyelids it is announced, as indeed it is everywhere else, by the formation of papulæ, which usually appear about the angles of the eyes; the eyelids soon become stiff, tense and chapped; and in children the eruption is occasionally followed by the loss of the cilia and hairs of the eyebrows. Several other scaly affections of the eyelids, as well as the disease which, following Willan, I formerly described under the name of *psoriasis of the lips*, now appear to me to belong to the group of pityriases, among which they will be found discussed.

3d. *Psoriasis* of the *trunk* rarely occurs alone; the disease almost invariably affects the extremities at the same time. When inveterate, its squamæ are commonly thinner and smaller than those observed in *psoriasis* of the extremities, especially when the knees and elbows are the parts affected.

4th. *Psoriasis* of the *scrotum* is a rare disease; when it does occur it generally becomes *inveterate*, and is attended with excessive pruritus, and most painful chaps. I have met with a case of *psoriasis discreta*, in which the patches were disposed in a line parallel with the raphe. The circular spots of *psoriasis discreta* occurring on the scrotum and verge of the anus in children, have been known to be mistaken for syphilitic tubercles, from which they differ in their mode of formation, which is that of squamous papulæ, in the more decidedly scaly look of their surface, and generally by the almost uniform existence at the same time of scaly patches upon the belly and thighs.

5th. *Psoriasis* of the *prepuce* is also of very rare occurrence, almost always becomes inveterate, and is attended with thickening of the skin, and painful and bleeding chaps, which are occasionally accompanied by some degree of swelling in the lymphatic glands of the groin. This form of *psoriasis*, usually very obstinate among adults, has occasionally required the operation for phymosis for its removal. It is of great consequence not to confound the squamous patches by which *psoriasis* of the prepuce begins with a syphilitic eruption occurring on the same part.

686. I have, lastly, to make particular mention of three varieties of *psoriasis* of the hands:

1st. *Psoriasis palmaris* may be distinct or confluent; in either case the disease begins with broader elevations than those of the other varieties: they are reddish in colour and the seat of a considerable degree of heat and itchiness; pressed upon strongly, or pinched, they become painful; and if rather numerous, the patient is compelled to give up every kind of manual labour. In the confluent species, the palm of the hand swells generally, and becomes of a uniform violet-red colour. The feeling of heat which was complained of at first, becomes gradually less distressing, and ceases at length, in a great measure, whilst the painful pruritus that accompanied it, becomes much less troublesome; during this time the cuticle that surrounds the elevations grows considerably thicker, acquires a yellowish colour like the skin of the heel, dries up and becomes friable, and at last of a dead white on the summits of the patches. At this period, the altered and cracked epidermis covering the elevations is detached, either spontaneously or by the nails of the patient, and leaves a new epidermis through which the corion shines. The epidermis in the vicinity of the diseased parts also undergoes modifications: it becomes considerably thicker than usual, and of a dirty yellow hue; it dries and looks mealy on the surface, and finally exfoliates irregularly, at first in the neighbourhood of the older patches, and then in that of the joints and natural folds of the skin of the hand. The desquamation in this case is always *irregular*, and is very different in appearance from that which happens in the variety next to be described—the *psoriasis palmaris centrifuga*: like it, however, and perhaps even more constantly, it is attended with linear fissures, which penetrate to the quick in the course of the lines of the palm, and with a still greater number of clefts that extend less deeply, and do not even reach the corion.

2d. *Psoriasis palmaris centrifuga*. This variety begins in the palm of the hand by a solid elevation whose summit is covered with a small white and dry epidermic scale; this spot is then surrounded by a reddish ring upon which the epidermis dries and is thrown off circularly. Around this first circle a second is before long formed, upon which a similar process of desquamation takes place, and these circles may appear one after the other, becoming more and more eccentric, until the whole palm of the hand is implicated, and squamous patches even appear on the palmar aspects of the fingers. The diseased parts are



affected with a very troublesome pruritus, which is increased whenever the hand is exposed to any elevation of temperature, or even when the fingers are moved for any length of time. When patients yield to the impulse to scratch the parts affected, the skin assumes a violet-hue, and at a later stage presents numerous cracks that pursue the course of the lines habitually observed in the palm. The surfaces between two of these crevices are covered with very hard and thick squamæ, and the whole palm is stiff and dry. This form of psoriasis has been principally observed among washerwomen and others, whose hands are habitually exposed to the contact of alkaline leys, or among coppersmiths, silversmiths and tinsmiths, the palms of whose hands are irritated by repeated pressure, combined with the contact of different metallic substances. Psoriasis palmaris usually grows worse in winter, and often gets well in summer. After recovery, the skin remains for some time smooth and of a dusky-red colour. It seldom happens that the disease does not recur several times after getting well, when those affected do not give up the craft they may be exercising at the time, and which has been recognized as its occasional cause at least.

3d. There is a variety of psoriasis *diffusa* which is developed on the backs of the hands and is known under the name of *grocer's itch*, because frequently seen among persons exercising this trade, although it also attacks bakers, laundresses, and even individuals of the better classes of society. The eruption begins in the shape of two or three squamous elevations, which spread to such a degree as at length to cover the whole dorsum of the hand. The integuments are before long seamed with numbers of dry and painful chaps; these occur especially over the wrist joint and the articulations between the metacarpal bones and first phalanges of the fingers. This variety of psoriasis is distinguished from the confluent and chronic lichen of the backs of the hands by the circumstance of the latter being always preceded by a considerable eruption of small papulæ. It is also important to distinguish this true psoriasis from the squamous inflammations artificially excited, to which individuals exercising certain callings are subject. When one of these varieties, or any other form of psoriasis extends to the whole back of the hand, the matrix of the nails is occasionally attacked with chronic inflammation, in which case the nails themselves become thickened, bent, cracked and at length detached; they are in due time succeeded by others, but these are liable to be affected in the same way. Psoriasis *plantaris* is a rarer disease than psoriasis palmaris, and less uniformly attended with chapping of the skin.

4th. With regard to psoriasis of the *inferior extremities* I have only to remark, that the disease is very apt to become *inveterate*. The legs then appear furnished with a general adventitious squamous envelop, which does, indeed, bear some resemblance to the lichenous covering of trees with which it has been compared.

687. Psoriasis rarely appears complicated with other inflammatory affections of the skin, if we except lepra. It has, however, been seen especially among children, occurring with characters of the greatest inveteracy along with eczema *impetiginodes*. Amidst the thin squamæ that cover the diseased patches, vesicles and particularly purulent points are then perceived. At a later period, these surfaces may become excoriated, and form thin, lamellar, yellowish-coloured scabs like those of the eczema. It occasionally happens, especially when children are attacked with the disease during the period of teething, that, on the first invasion, or during the course of psoriasis, a certain degree of derangement is apparent in the functions of the digestive organs. It was this circumstance, undoubtedly, that led Willan and Bateman to speak of epigastric pains, lassitude, headache and various other symptoms as precursors of psoriasis, which are, in fact, rarely observed in connection with the disease unless when developed under the circumstances indicated.

688. *Causes*.—Next to eczema and lichen, psoriasis is one of the most common of the chronic affections of the skin. Of all the variety of forms assumed by the disease, that which I have designated psoriasis *discreta* is the most common; in a given number of cases this will be found in the proportion of three-fifths to the whole. Psoriasis shows itself principally among adults, between the ages of twenty-five and thirty years; women of a nervous and sanguine temperament are particularly obnoxious to its attacks. Of all the chronic and non-contagious affections of the skin, psoriasis is that the hereditary nature

of which is most satisfactorily ascertained. The seasons have a very marked influence on the production of this disease; it is usually developed in the beginning of the spring or autumn. The influence of different trades or professions appears limited to a few local varieties. To conclude, irritation of every kind, direct or indirect, applied to the skin, may prove the occasional cause of psoriasis; the disease has, in fact, been seen succeeding repeated attacks of lichen, prurigo, different other diseases of the skin, and the application of a common blister.

689. *Diagnosis*.—Psoriasis can only be confounded with three diseases, which like it affect the squamous form, namely lepra, pityriasis and scaly syphilis. There exists, indeed, between lepra and psoriasis a very great similarity. The resemblance of psoriasis *discreta* to lepra is more particularly striking. Both of these affections of the skin commence as solid papular-looking elevations, both soon assume the shape of circular scaly patches, and these in the same patient frequently present the appearances characteristic of psoriasis *discreta* on the trunk, and those distinctive of lepra on the knees and elbows.

Some recent writers have consequently maintained that lepra and psoriasis were nothing more than two varieties of the same disease. There are, however, certain characters which distinguish these two eruptions, or, if it must be so, these two degrees of the same form of inflammation, from each other. The patches of psoriasis *discreta*, for instance, are never so broad as those of lepra, neither are their edges raised, nor their centres depressed like those of the latter; in psoriasis, too, the squamæ adhere more firmly and are less abundantly produced than those of lepra. The differences between lepra and psoriasis *diffusa* are still more marked. The patches of the latter are irregular and not depressed in their centres, those of the former are exactly circular, and even when several leprous spots are blended together, their originally circular shapes continue to be proclaimed by the arcs of circles presented on their circumference.

Psoriasis is distinguished from syphilitic scaly patches (psoriasis *syphilitica*, Willan), by the coppery or livid hue of the latter, which is deeper towards their centre than their circumference; they are also without true squamæ, being covered by a transparent epidermic layer, which is usually detached circularly, exposing a smooth and shining surface of a coppery-yellow, bounded by an epidermic edge. Syphilitic blotches, further, are not accompanied with any pruritus, and are generally complicated with evident venereal affections of the pharynx or conjunctiva, with nodes, nocturnal pains, &c., and get speedily well under the influence of mercurial medicines carefully administered. Lastly, these blotches disappear from the circumference towards their centre, a character which of itself distinguishes them sufficiently from the squamous patches of lepra and some of the varieties of psoriasis.

Psoriasis *discreta* of the hairy-scalp differs from pityriasis of the same part, by appearing under the form of patches which, beneath the squamæ, always present a red central point that rises above the level of the skin generally.

690. The varieties of psoriasis designated by Willan *diffusa* and *inveterata* commonly prove very obstinate diseases, more so even than lepra. Psoriasis *discreta* vel *guttata*, in a general way, is less rebellious than the *confluens* vel *diffusa*, which in its turn is less intractable than the *inveterata*; this last variety, indeed, is often absolutely incurable. When psoriasis *discreta* begins to get well, the amendment is announced by the sinking of the patches, and takes place at first in one or several points of a particular district, from which it spreads to the other regions affected. When the varieties *diffusa* and *inveterata* end in recovery, the chaps of the skin disappear, the inflammation of the corion diminishes gradually, the altered epidermis is replaced by one of less thickness, less dry and inclined to crack, and after many successive desquamations, the dermis in the points affected becomes covered with a cuticle similar to that of the healthy integument.

691. *Treatment*.—The medical treatment and dietetic plan pursued in psoriasis ought to be based on the same principles as those that guide us in lepra; the curative means only require to be modified according to the more or less highly inflamed condition of the integuments. When psoriasis *discreta* is recent, and an adult is its subject, the disease must be attacked by one or two venesections. I am in



possession of a sufficient number of facts to show that this measure is constantly serviceable, and the same conclusion has been come to by many other practitioners. Plain baths, or better still, narcotic and emollient temperate baths, which lessen the irritation of the skin and the pruritus with which it is constantly accompanied, are to be employed at the same time and subsequently. The douche and vapour-bath are also frequently found of service in the cases of adults. By using these alternately with sulphureous-water baths, confluent psoriasis, accompanied with no great degree of inflammation, are frequently got rid of in the course of three or four months. When confluent psoriasis is of old standing, a modification of the skin may often be advantageously attained by anointing it with an ointment of the tartrate of antimony; the same practice has even been found serviceable in some cases of the *inveterate* disease, although in these the alteration of the skin is so deep that the affection is generally incurable, at least among the aged. *Inveterate* psoriasis is always improved by the use of the emollient and narcotic bath, as well as of the vapour-bath and douche. Among the aged, attacked with inveterate psoriasis, whose skin is thickened and indurated in different parts of the body, the treatment must be limited to such palliative measures. The same plan also appears to me better than any other when the subject of the disease is a member of the labouring class of the community, who would certainly have a relapse as soon as he was thrown upon his old occupations and habits. Such patients, labouring under inveterate psoriasis, have been seen, who derived no benefit whatever from taking the vapour-douche and bath more than one hundred and fifty times, or having undergone the most energetic internal treatment, from which, indeed, unpleasant symptoms of different degrees of severity resulted.

In the treatment of psoriasis *diffusa* and *discreta* the exhibition every day for some months, of half an ounce of Epsom salts, or two drachms of subcarbonate of potash, or a few grains of calomel in combination with the resin of jalap, so as to procure several alvine evacuations, has been favourably recommended, patients at the same time making use of the tepid-bath; the purgative medicine, however, is immediately to be suspended should unequivocal symptoms of gastro-intestinal disturbance at any time make their appearance. This plan seems more particularly available in psoriasis of the face and hairy scalp.

The deuto-chloride of mercury, in the dose of one-fourth of a grain, and the sulphurated sulphite of soda in the quantity of a scruple, daily, have also appeared to accomplish some cures of psoriasis. The tincture of cantharides is another medicine which has been tried in the different species of psoriasis, particularly the *inveterata*, with some success; the dose has been carried gradually from five to sixty drops every day, when no appreciable disturbance in the digestive, respiratory or urinary organs supervened. The medicine is often continued for three or four months before any favourable change takes place in the state of the skin. One or other of the common arsenical solutions has also been strongly recommended in this obstinate form of disease. Arsenic of course requires great care in its exhibition; its effects must be closely watched, and it is advisable to give up its use for a few days every now and then. It is undeniable that by means of these active medicines several of the varieties of psoriasis, even the most inveterate, have been cured; but it is no less certain that the majority of the cures thus accomplished have been but temporary, relapses having occurred the following spring or autumn; that such relapses are more especially frequent among the labouring classes of the community, and lastly, that the greater number of cases of psoriasis *inveterata* treated by such means have been in nowise amended, although the medicines were continued for five or six months. I am therefore of opinion that it is in general inexpedient to put patients affected with psoriasis *inveterata* upon an arsenical course, in the faint hope of deriving a mere temporary improvement, with the fear before our eyes of inducing some obstinate derangement of the digestive organs, or of permanently injuring the general constitution. (a)

(a) I shall, in a subsequent page, introduce cases to show the efficacy of the arsenical treatment, but it must be conceded that there are good grounds for the author's cautionary remarks on this point. The

In a word, then, psoriasis *discreta* and *diffusa* can be successfully attacked by measures less dangerous than those just mentioned, by the vapour bath, ointment of white precipitate, &c., &c.; and to me a palliative plan of treatment appears the only one available in cases of inveterate psoriasis, especially when its subjects are individuals belonging to the labouring classes of society.

692. The *local* varieties of psoriasis offer the same curative indications as the general disease. Fomentations, baths, cataplasms, emollient and narcotic unguents are all useful when the skin is red and painful. In psoriasis *palmaris* simple baths and fomentations, the vapour douche, and calomel ointment are habitually employed. When the disease has arisen from, or seems to be kept up by any evident outward cause, the first indication of course is to make this unavailing.

#### Historical Notices and particular Cases.

693. The Greek physicians, under the title of *psora*, evidently indicated two different diseases. That which they designated *ψώρα ἰκνός*, or *ulcerous psora*, appears to correspond with the pustular inflammation described in this work under the name of impetigo; the other, which they entitled simply *psora* or *leprous psora* (*ψώρα λεγκός*) was probably the squamous disease we have just been engaged in describing. Galen<sup>1</sup> makes use of the word *psoriasis* to signify a *squamous state of the eyelids and scrotum*; but his description appears equally applicable to pityriasis, lichen, and other diseases affecting these parts as to the malady now denominated psoriasis. Nevertheless it is on the strength of this passage that Willan has felt himself authorized to collect, under the common title of *psoriasis*, every non-contagious squamous inflammation different from lepra and pityriasis. The word *psora* does not occur in the writings of Celsus; this author, however, has clearly pointed out the characters of the *leprous psora* of the Greeks, or *psoriasis*, in his definition of the second species of impetigo.<sup>2</sup> Willan conceives that the Arabian writers refer to psoriasis under the name of *usagero*, a word which is rendered by the Latin translators *serpedo* or *serpigo* and *impetigo*.<sup>3</sup> Psoriasis was subsequently mentioned rather than described by Mercurialis, Hafenreffer, Plater, and others under the name of *psora* and *scabies sicca*, titles also given to lichen. The disease was spoken of by Manardus, Fernelius, Sennertus, Willis, &c., under the title of *impetigo*. The following passage of Sennertus appears peculiarly applicable to psoriasis *diffusa*: "cognoscitur morbus quod cutis dura, sicca, aspera et quasi squamosa redditur; adest pruritus; et malum in dies latius sepiet, et ab initio exiguo sese latè diffundit."<sup>4</sup> Several English writers might be referred to who have described psoriasis under the names of *scaly tetter* and *dry scall*. Willan was the first who gave a full and accu-

following case, related by Mr. Erichsen, (*Med. Gaz.*, 1843), conveys wholesome admonition.

"In illustration of the bad effects that may result from the injudicious use of the preparations of arsenic, I may mention that I have at present under my observation a young lady, of a highly nervous temperament, but otherwise perfectly healthy, and without any hereditary disposition to disease, who, whilst suffering from an attack of psoriasis of the legs some years ago, was advised to take Fowler's solution, which she did in the hope of speedily getting rid of, to a delicate female, a disgusting affection, to such an extent, without the knowledge, however, of the medical attendants, that she brought on extensive derangement of the stomach, which was followed by a violent neuralgic attack, together with, at a subsequent period, a distressing train of hysterical symptoms, which have terminated in a state of dementia, that, having now existed for nearly four years, may almost be looked upon as incurable."

<sup>1</sup> Galeni Opera. De oculo, cap. 7, def. med.

<sup>2</sup> "Alterum genus peius est, simile papulæ fore, sed asperius rubicundiusque figuras varias habens; squamulæ ex summâ cute decidunt," &c.—(Celsus, de medicinâ, lib. v. sect. xxviii.)

<sup>3</sup> Serpedo est asperitas quæ in superficie accidit cutis et ad nigredinem declinat, aliquando ad ruborem. Peliginis autem chronicæ et diuturnæ in quâ non exoriatur cutis, signa sunt, quod in profunda est membri, et squamulæ ab eâ tolluntur rotundæ quales piscium videmus squamas.—(Haly Abbas. Theor. lib. viii. cap. 16.)

<sup>4</sup> Sennert. Med. Pract., t. i. 3o de impetigine.



rate account of the disease under the title adopted in this place. Bateman and Gomez have followed him without modification in their several works. The still more recent observations of Mr. Plumbe tend to show the identity of psoriasis and lepra, and those of Dr. Duffin go more particularly to prove the inflammatory nature of these two diseases. Some French pathologists have referred to psoriasis vaguely under the name of *dartre sèche*. Alibert has described the disease in its severest form (the psoriasis *inveterata*) under the title of *dartre squameuse lichenoides*, and has given several cases of the varieties *discreta* and *diffusa* under the common name of *dartre furfuracée*.

Some observers, in opposition to the opinion generally entertained, believe that psoriasis may sometimes be transmitted by contagion,<sup>1</sup> but the facts quoted in support of this opinion are any thing but conclusive.

Cases of the different varieties of this disease, and remarks on their treatment, occur in many of our periodicals.<sup>2</sup>

CASE CXII.—*Psoriasis discreta of the axillæ; the gelatino-sulphureous douche*. Madame D \* \* \* was attacked in the beginning of March, 1826, with psoriasis *guttata* of the axillæ, a disease from which she had already suffered much two years previously, and which had only yielded to the long-continued use of sulphureous baths and purgatives. When I was consulted, there existed under the right axillæ three oval patches of considerable size, and two or three small elevations as large as millet-seeds. The patches were red, not scaly; their edges were not raised, nor their centre depressed like those of lepra; they had nothing of a coppery nor livid tint like syphilitic blotches. They were further very itchy, and the patient scratched them when asleep or only half awake, by which the pruritus was subsequently greatly increased, and the patches next day made to look more highly inflamed. The pressure of the corsets also irritated them during the day; they had never discharged. In the left axillæ there were five patches of a similar description, two others situated on the olecranon were covered with white squamæ of considerable thickness. I recommended the sulphureous bath and douche from a watering pot at the temperature of 28° Reaum. Twenty baths for a quarter of an hour, and fifteen douches continued for ten minutes each time, restored this lady to perfect health.

CASE CXIII.—*Psoriasis discreta of the scalp; blood-letting and purgatives*. Alphonse \* \* \* was affected two years ago with a dry scall of the eyebrows, which got well by being anointed with grease and washed frequently with Eau de Cologne. Within the last year a similar disease had made its appearance on the scalp, and during the last three months had spread rapidly. March 20th, 1826.—The right frontal region, the ears and the scalp are exclusively affected with psoriasis *discreta*, four patches of which, covered with squamæ, not prominent, and of the form and size of a shilling, exist on the right side of the forehead. The squamæ are pulverulent, and have a slight yellowish tint; the skin under them is red, and the margins of the patches blend with the healthy integuments. There are also a few patches on the concha of the ear, and a great many more of a small size, circular shape, and covered with minute furfuraceous and yellowish-coloured squamæ, are discovered on the surface of the hairy scalp, more particularly on the right side near the angle of junction between the frontal and temporal bones. Many of these patches are confluent, and not very regularly circular. They are only affected with pruritus when the head is accidentally heated, and have not caused the loss of the hair. The rest of the body is unaffected with any similar patches, but a few solid elevations, already squamous on the summits, are visible on the arms. The whole of the principal functions are performed with regularity. (*V. S. ad 3xii; an ounce of Epsom salts, with intervals of two days, repeated sixteen times; lotions with water nearly cold, night and morning.*) The cure was complete towards the end of May, 1826.

CASE CXIV.—*Psoriasis discreta of the limbs; diffusa of the trunk*.

<sup>1</sup> Gazette Médic., 1832, p. 110.—Bull. des sc. méd. de Ferussac, t. xvii. p. 44.  
<sup>2</sup> Journ. Hebd., première série, p. 258 (psor. inveterata cured by the solut. of Fowler).—Journ. Hebd., t. iv. pp. 74-77; t. vii. p. 432; t. viii. p. 108.—Revue médic. Juin, 1830, p. 341 (employment of the chloruret of sulphur).—Lond. Med. Gazette (employment of nitrate of silver).—Lancette Française, t. v. p. 42.—Journ. des hôpitaux, p. 349.—Journ. complém. des sc. méd., t. xxxix. p. 45; t. xliii. p. 71.—Lond. Med. Gaz., v. xi. p. 278.

J. D. le T \* \* \*, seven years of age, was attacked with psoriasis in the month of June, 1826. A number of small elevations appeared on the arms and hands, but soon vanished again. Towards the end of August, of the same year, several of the papular elevations of psoriasis appeared on different regions of the body. (*Baths, anti-scorbutic syrup.*) This child was brought to me on the 4th of September, 1826. Two very broad squamous patches exist on the back of the trunk; one superiorly, between the shoulders, is entirely covered with squamæ; the second, inferiorly, and stretching almost completely across the lumbar region, is less thickly beset with squamæ, and presents indications, here and there, of healthy skin. On the shoulders and back of the neck, a few smaller patches also occurred; these were from three lines to half an inch in diameter, prominent, and covered in the centre with partially detached epidermic lamellæ. Under these squamæ the skin was dry, and presented a red colour which disappeared with pressure. Near the large lumbar patch several smaller ones were observed. The anterior part of the chest was almost entirely occupied with large squamous patches, between which appeared numbers of small islets of healthy skin. These patches, like the rest, were covered with dry, epidermic laminæ, rough to the touch; the corion beneath which was also of a red colour, which disappeared on pressure. A considerable number of patches of psoriasis *discreta* existed on the surface of the abdomen, divided by a broad but irregular squamous band which extended from the ensiform cartilage to the pubes. On the limbs various patches, of different sizes, and sundry papular-looking solid elevations, one or two lines in diameter, and slightly prominent, were distinguished. The patches were circular, red at their base, and covered on their summits with minute squamæ, which were not long of being detached. After their fall, the epidermis occasionally formed a little circle of a dull white colour around the place they had occupied, in the centre of which a red and prominent point was perceived. Various other compound patches, of very irregular shapes, were formed by the union of two or more of the papulæ or squamous rounds. Lastly, a few small patches, not more than from five to six lines in diameter, of a circular shape, and covered over with minute squamæ, of a white colour, and adherent or easily detached, were observed. Upon the face, and especially the forehead and parts about the outer ends of the eyebrows, there were a number of the papular elevations and squamæ of psoriasis *discreta*. (*Eight leeches to the band of healthy skin, between the two dorsal patches, emollient and narcotic temperate baths; the diluted sulphuric acid.*) On the 14th of September the good effects of the treatment prescribed were apparent in the cessation of an adventitious sero-purulent secretion which was going on from several of the patches, and by a slight degree of sinking in several of them. (*Leeches and baths as before.*) On the 21st the acid was renewed, and four leeches were applied under the ears, and seven to the region of the navel; the cutaneous inflammation was yielding gradually. 20th.—The skin is now in a great measure free from squamæ, and appears stained here and there of a reddish brown; no new squamous elevations were formed. (*Temperate narcotic bath; three drachms of Epsom salts in the morning; fasting every other day.*) October 8th.—There are now no visible traces of the squamous inflammation; the skin, however, still presents some reddish stains, on the surface of which the epithelium is smooth and shining.

CASE CXX.—*Psoriasis discreta. Lepra*. A young washerwoman, aged eighteen, was attacked without assignable cause with psoriasis *discreta*, in the beginning of the year 1826. The disease first appeared on the elbow and anterior aspect of the right forearm, next upon the opposite arm, and lastly on both of the inferior extremities and trunk. May 10th, 1826.—At this time there were observed upon the skin, 1st. A number of solid elevations, the size of millet seeds, red at their base, and covered on their summit with a minute scale of a dull white colour: 2d. Several papulæ which have been torn with the nails, and are covered with little brown-coloured scabs, the size of pins' heads, and exactly similar to those of prurigo: 3d. Various patches from three to four lines in diameter, flattened and red, and dry on the surface, which is covered with minute squamæ. When the squamæ are detached, the patches present a red-coloured central point similar to that they exhibited at their origin; the tint of this point in some of them is so deep that it approaches a violet. Other



patches are of much larger dimensions than these, and are of an irregular round or oval form; their edges, raised above the level of the surrounding integuments, are of a very deep red; the tint gradually diminishes in intensity from the circumference of the different patches, towards the centre, which looks slightly depressed, and of a rose colour, so that these patches resemble in every respect those of lepra. Several patches of a still larger size are extremely irregular in their outline, and evidently formed by the fusion of two or more into one. On the surface of these compound patches, a great many superficial furrows, similar to, but more conspicuous than, those naturally presented by the epidermis, are observed. The squamæ are very small, and very thin. The integument in the intervals between the patches is of singular whiteness and delicacy. The inflamed parts are affected with a pruritus, and sense of heat, of considerable intensity, which are always increased after meals, and during the night. The whole of the internal organs, particularly those of the digestive functions, appear to be perfectly healthy; the catamenia are regular, (*V. S. B. ad 3xii. Two drachms of sulph. soda in real broth; plain bath every other day at 27° R.*) May 18th.—The patches are less inflamed; the aperient does not distress the patient, and is ordered to be continued. 26th.—The papular elevations are much fallen; several of the squamous patches have vanished entirely, and others present two very remarkable appearances, being here reduced to complete rings, within which the skin looks healthy though somewhat sallow, there, to mere arcs of circles. The same plan of treatment was continued, and the cure was accomplished within six weeks.

CASE CXVI.—*Psoriasis palmaris; blisters.* A. B., aged forty-two, labouring under palmar psoriasis confined to the right hand. Various measures which had been recommended, failed to do much good, probably, from not having been regularly employed. Two flying blisters applied to the palm of the hand were followed by the detachment of the altered epidermis, and the formation of one that was smooth and permanent.

CASE CXVII.—*Psoriasis discreta of the limbs, diffusa of the elbows: calomel ointment.*—Fr. Chastel had been affected with psoriasis of the elbows, since the end of July, 1832. On the 14th of January, 1833, the disease had extended considerably along the dorsal aspect of the arms and forearms, these regions being occupied by two large patches, irregular in their outline, raised above the general level, furrowed by a great many linear chaps, and covered with squamæ of a dull-white colour, which could be readily rubbed off with the finger, when the red and prominent corion beneath was exposed. Patches of a similar description occurred on the lumbar region. On the outer surface of the thigh and knee, and on both of the forearms, the disease presented itself in a simple form, the patches being small, isolated, circular, and covered with dry white squamæ. The patient made no complaint of pruritus, or smarting, and the principal functions were regular. He was put upon the decoction of dulcamara, ordered to rub in the calomel ointment, and to take the plain bath. By the 20th of January, the good effects of this treatment were already very apparent; the squamæ were, indeed, still reproduced, but they were not so copious, not so white, and the corion under them, which at first was very red and prominent, now presented a pale rose tint. Half a pound of ointment containing one ounce of calomel had been rubbed in, and no symptom of pyalism was manifested. The same treatment was continued to the 1st of February, when the oily appearances of disease remaining were a few papular-looking eminences as large as pins' heads. The ointment was now discontinued in order that the effects of the dulcamara might be the better studied. The decoction was prepared with two ounces of the herb to each pint of water. After the lapse of a week this medicine seemed to have done no good; on the contrary, squamæ began to be reproduced in several places. A recurrence to the calomel ointment speedily brought about a notable improvement, which by the end of the month was still more evident. The dulcamara was given up and a gum-lemonade substituted for it; the plain water-bath was continued the whole time. The patient went on favourably; the skin, with the exception of a very small patch on the elbow, being quite free from disease. The vapour-bath was ordered in lieu of the simple water-baths hitherto used; and on the 10th of March the places mentioned were touched with the nitrate of silver. The eschars produced were

detached on the 19th, leaving the skin they had covered smooth and of a vivid red; this tint soon disappeared, and on the 1st of April the integument had recovered its natural colour. The patient was dismissed on the 8th of the month, well, having been forty-four days under treatment, during which time there had been expended in the way of inunction nearly five pounds of lard, containing ten ounces and six drachms of calomel, neither the salivary glands, the mucous membrane of the mouth, nor the gums having shown any symptom of irritation.

CASE CXVIII.—*General Psoriasis. Desquamation from the parts covered with hair.*<sup>1</sup>—James Shooter, twenty-nine years of age, entered St. Bartholomew's Hospital on the 14th of July, 1828, affected with rheumatism of the joints and a cutaneous disease. The patient had been affected eighteen years previously with a red or scaly eruption upon the thorax, which after two years was either cured or disappeared of itself. Seven years afterwards, another eruption of the same kind, but perhaps of less severity, made its appearance, and has continued since then to the present time. The scalp is entirely covered with minute whitish squamæ, which are readily detached by rubbing the hair or scratching the integument. This part is not red, but is very hard and immovable under the finger, and feels stiff and unyielding to the patient. The forehead is occupied by several patches of a reddish-brown colour, which project slightly above the general level. Several other patches occur which are covered with squamæ; these are readily detached and the subjacent skin is red; on looking narrowly into this region, it is seen to be covered with quantities of fine white squamæ. The face presents the same morbid appearances as the forehead; the skin is hard, thickened and stiff; the difficulty experienced by the patient in speaking, from this state of the integuments, is very perceptible. The ears and surfaces behind them are even more affected than the rest of the head; the squamæ are larger and more confluent, if the expression may be used, and the skin is redder here than elsewhere. The neck and breast, however, of all the regions are those that are most deeply affected; the skin, besides being covered with many squamæ, is extremely red, rough, chapped and very stiff. In moving these parts the patient complains of a very unpleasant sensation produced by the dryness and stiffness of the integuments. The other parts of the body present the same morbid alteration in various, generally inferior, degrees of intensity. On the backs of the fingers a number of small isolated and perfectly circular squamous asperities, traversed in the centre by a hair, are perceived. The skin thus beset is extremely rough to the touch, and feels like a file. The asperities only occur in situations furnished with hair, that is to say, in the middle of the dorsal aspect of the first and second phalanges. By detaching them from the skin by means of a pin, the projections are found to be owing to an agglomeration of squamæ, looking like minute grains, within the epidermic prolongation that surrounds each hair. The patient had often plucked out the hairs thus surrounded, but the asperities always grew again with the hair. The roots of the hairs of the arms presented the same appearance, but in a very superior degree. A blister was applied to the surfaces thus affected, but failed to excite vesication. The patient was bled several times, and to a large amount; he only appeared to derive signal relief from the first venesection. (a)

(a) *Psoriasis inveterata. Arsenical treatment successful.*—"Sarah Partons, ætat. twenty, of lymphatico-sanguine temperament, being stout, rather pale, with gray eyes and light brown hair, came under my care on the 12th January, for psoriasis of the legs, arms, knees, and elbows, of thirteen years' standing. Her father and brother (who are now under my care) labour under the same disease. There are a number of patches of psoriasis, varying from the size of a sixpence to that of a crown piece, about both legs and arms, and a few on the back. Immediately below the left knee there is one as large as the palm of the hand, and the points of both elbows, but more particularly the left one, are covered by thick scaly incrustations, extending some way down the posterior aspect of the forearm. The diseased patches were in a very indolent condition, there being no inflamed areola about them, and being unattended by any tingling

<sup>1</sup> Communicated by Mr. Tarral.



or itching. The general health was good, and there were no dyspeptic symptoms of any kind. As the disease was of such long standing it had been subjected to a great variety of treatment, and she had been a patient at two of the metropolitan hospitals, at one for a period of eight months, without receiving any benefit. I therefore, as she was very anxious for a cure, determined to try at once the effect of arsenic, and accordingly ordered her two and a half minims of the solution of the arsenite of potassa twice a day; the biniodide of mercury ointment diluted with three pints of ung. cetacei, to be rubbed into the diseased patches night and morning. The quantity of the solution of the arsenite of potassa was gradually increased until the 27th, when she was taking seven and a half minims three times a day. By this time the diseased patches on the arms, and some of those on the legs, had been cleared of their scales; the affected skin was, however, redder than natural, and rapidly covered itself with scales of epidermis if the use of the ointment was interrupted. On the 28th some constitutional derangement, as headache, lassitude, pain in the eyes, and thirst, came on: the solution was accordingly discontinued. On the 4th February it was resumed in doses of five minims three times a day, which quantity was continued without any disturbance, either local or constitutional, until the 10th March, when, as the disease appeared to be entirely cured, with the exception of a red stain as it were, of the skin in the site of the affected patches, the dose of the solution was diminished to three minims, which quantity was continued, in order to prevent a relapse, until the end of the month. The ointment of the biniodide of mercury had been persevered in during the whole of this time, its strength having been increased to equal parts of the ointment of the pharmacopœia and of spermaceti cerate." Mr. Erichsen—(*Med. Gaz.*, 1843.)

*Psoriasis of the neck and back: chronic rheumatism. Cure of both diseases by liquor of hydriodate of mercury and arsenic.*—"Lawrence Keane, ætat. forty-six, an old sailor, of a sallow complexion, with dark hair and eyes, placed himself under my care on the 17th January last, for psoriasis of the posterior part of the neck and back, under which he had been labouring for the last four years. He states that, having been shipwrecked about twenty-four years ago, he was attacked with acute rheumatism, since which time he has never been free from pains in his limbs. I ordered him twenty minims of the solution of the hydriodate of arsenic and mercury three times a day, and a lotion of the bichloride of mercury to wash the affected parts with. On the 28th he had the dose of the solution increased to thirty minims, and on the 15th of February he was perfectly cured of the disease of the skin, the rheumatic pains, from which he said he had not been free for twenty-four years, having ceased entirely for some time past. Since this date I have several times seen him, and he continues perfectly well in every respect."—*Ibid.*

*Psoriasis inveterata with eczema impetiginodes cured by the sulphur vapour bath.*—"The subject was a gentleman about forty years of age, who from his boyhood has been afflicted with a most inveterate cutaneous disease, but from which he is sometimes quite free. His parents were not known to have had any skin disease, and he has no clue to enable him to account for its origin. When this gentleman was first subjected to the employment of the bath, he was unable to walk; his legs, from the toes to the middle of the thighs, were incased in a thick scab, with long deep fissures, from which issued an abundant ichorous discharge. The thighs above this were studded with impetiginous pustules, the sacrum, gluteus muscles, and part of the lumbar region, were likewise covered with scab containing deep cracks. The arms and axilla on one side were covered with large patches of scab, all discharging the same kind of fluid. He was obliged to move with great caution, lest he should extend these cracks, or occasion fresh ones, which were always attended with much pain and inflammation. He had been in the habit of taking and persevering in the use of medicine, but was not aware that he derived much benefit from it.

"He was directed to take three emollient vapour baths, and afterwards to persevere daily in the use of the sulphureous fumigating bath, and to take occasionally opening medicine. After the third fumigation, the amendment was evident, and he expressed himself much more comfortable in his feelings; he continued them for a fortnight with regular progressive improvement. At the expiration of a

## PITYRIASIS.

Vocab. *Dandriff, Pityriasis, Porriigo.*

694. Pityriasis is a chronic and non-contagious inflammatory affection of the skin, characterized by the evolution of red *points* and more frequently of red *spots* or *patches* from which a *mealy* or *foliaceous* desquamation soon commences and continues till the disease is either cured or gets well spontaneously.

This affection may make its appearance within a short space of time upon almost every part of the body in succession, (*general pityriasis*), or remain confined to any one region in particular (*local pityriasis*).

695. *Symptoms.*—General pityriasis is one of the least frequent and most obstinate of the diseases of the skin; it almost always invades without precursory symptoms; patients complain, in those regions that are about to become affected, and most commonly in the extremities, of a violent feeling of itchiness, or rather of a painful and tantalizing prickling sensation, which seems to have its seat under the skin, between it and the flesh. If the part thus affected be examined, and it chance to be without hair, a number of very superficial *erythematous blotches* are perceived. The heat of the surrounding integument is almost uniformly increased, the subcutaneous cellular tissue is swollen, sometimes painful when pressed upon, and the soft parts generally seem to suffer from distension. It may be difficult to demonstrate this primary redness when the scalp is the part affected; but the phenomenon is always abundantly evident on other regions of the body when looked for early enough. Within a few days the blush diminishes in intensity and soon disappears entirely; the epidermis then cracks, becomes less adherent, and a process of desquamation commences which varies in its characters according to the nature of the surface affected. On the outer surfaces of the legs and arms the cuticle is thrown off in foliaceous lamellæ, which continue to adhere for some time, in one case by their centre, in another by either of their extremities, so as to appear floating, as it were, on the surface of the skin. These lamellæ, formed by the cuticle nowise

month, the arms and axilla were well, and the scab on the legs was now only in patches, the left leg being much the best. There now came on a fresh accession of disease, showing itself in pustules with yellow heads a little above each inner ankle; higher up there were numerous small vesicles containing clear lymph; some other parts of the legs still, however, went on improving, and the fumigations were continued; this accession was not of long continuance, but scabbed over, healing underneath. He now complained of heat and itching in the face, particularly about the chin; he had slight feverish symptoms, for which he was directed a dose of the submur. hyd. and some saline medicine: he became relieved: *achores* made their appearance and gradually spread over the lower jaw, containing yellowish matter, forming scabs, with surrounding inflammation. To this part he pretty constantly applied flannels wrung out of hot water, and covered it with a bread and water poultice at night: there was no cracking of these parts, but much watery discharge.

"He had used the fumigations daily six weeks; he now complained of stiffness, itching, and redness in the left groin. On examination, the inguinal glands were enlarged, hard, and painful to the touch; as the swelling of the glands subsided, the redness increased, and he had intertrigo, which became very troublesome to him. A space the size of a large dollar next made its appearance on the right clavicle, near the humerus, of a bright threatening aspect, and a smaller spot of the same appearance showed itself on the left clavicle, both itching very much, and with moist exudation; these spots in forty-eight hours became joined by an inflamed line about an inch broad, hanging, as it were, like a necklace: round the larger spots there came many small-sized pustules with yellowish matter in them; these did not extend; the large spot gradually became whiter in the middle, extending to the edges, disappearing slowly, leaving a shining, smooth red surface, which, with the connecting line, gradually went away: of the intertrigo he was not quite well when business called him into the country. The legs, back, and arms were quite well: the gentleman used the bath seven weeks."—*Ibid.*



thickened, vary from about three to eight lines in diameter. Those parts of the skin from which they have been recently detached or from which they have been removed by the action of the nails, the rubbing of the clothes, &c., are usually of a rose colour; further, when patients have yielded to the impulse to scratch, occasioned by the violent pruritus which accompanies the disease, the parts of the skin which have recently shed their cuticle pour out a serous, yellowish-coloured fluid, similar to that observed in the moist eczemas, and occasionally so abundant as completely to soak the linen or other clothing with which the parts affected happen to be covered. When this adventitious circumstance occurs to such an extent, it is apt to render the diagnosis of pityriasis obscure.

Pityriasis is generally less severe on the insides of the limbs, and the desquamation then always consists of smaller laminae of the cuticle; it is often, indeed, pulverulent. Behind the ears, about the clavicular fossae, the axillae, bends of the arms, wrists, navel, prepuce, groins and insteps, the inflamed skin has something of the look of intertrigo, that is to say, it is rough, moist, and slightly chapped in the direction of the natural folds of the skin which are powdery on their edges. On the anterior part of the breast and belly the desquamation always occurs in much smaller lamellae than on the posterior surfaces of the trunk. On the regions of the olecrana and patellae, and especially on the palms of the hands and soles of the feet, where the cuticle is naturally thicker, the exfoliation takes place in broader and thicker laminae than elsewhere; on the face and hairy scalp, on the contrary, it is almost uniformly powdery in its appearance.

Pityriasis is accompanied with violent pruritus, especially of those parts where the eruption is recent, and of those where it is accidentally exasperated; the symptom then gains such a degree of intensity that the sleep is disturbed, and is only changed into a sensation of the most distressing kind by the efforts of the patient to allay it by scratching; the satisfaction, however, the enjoyment experienced by yielding to the impulse, is described by patients as surpassing every other they have known. After the state of excitement or exaltation thus induced, has passed away, patients experience smarting sensations of considerable violence, and fall into a kind of dozing state which is frequently followed by sleep.

As to the principal functions, they are not in general very remarkably disturbed; yet it does occasionally happen that patients, labouring under extensive pityriasis, present functional disorders of the digestive organs. I have seen all the symptoms of chronic inflammation of the mucous membrane of the stomach and bowels under such circumstances, and remember one case in which the severe suffering occasioned by acute pityriasis extended to the whole surface of the body, and the repeated serous evacuations that took place from the bowels even proved fatal. Amenorrhœa is occasionally observed to precede or to follow an attack of pityriasis. I have never observed any thing like a true febrile paroxysm except in those cases in which the eruption broke out over almost the whole surface of the body at once, or at those times when the disease seemed to increase in severity, or otherwise, when an inflammatory affection of the intestines was superadded to the pre-existing malady.

The continuance of the symptoms of *general* pityriasis, and their mode of succession and increment, are subject to numerous shades of individual variety. The disease is frequently seen arising in situations where it never before appeared, at the same time that it is vanishing upon others where it had appeared fixed for a great length of time. The very appearance of the disease, indeed, is modified by these same circumstances: powdery or scaly, as in slight ichthyosis, upon those points where the inflammation is declining but still lingers in a trifling degree, of a vivid red and moist upon those where the inflammation has been accidentally increased, whilst in those places where desquamation is no longer going on, the skin has a white and slightly yellowish tint.

The cellular membrane is more or less tumefied in those places where the inflammation possesses some acuteness, and in the lower extremities, even when there is little apparent redness under the squamæ. When the disease extends to the greater portion of the surface, patients can generally gather a considerable quantity of squamæ from their beds every day. Lastly, when parts provided with hair are attacked, the disease causes its partial fall.

696. I have already mentioned the principal varieties of appearance presented by pityriasis occurring on different regions of the body. The better to expose the characters of the local varieties of this disease, however, I here add a few particulars connected with each:—

1st. *Pityriasis capitis* is, of all these varieties, the most frequent and that which has been longest known; it has, however, been often confounded with the desquamations consequent on psoriasis, lichen, and eczema, and with those which take place without inflammation from the scalp in some individuals.

Individuals attacked with *pityriasis capitis* suffer habitually from a considerable itching of the scalp, especially on the first attack of the disease, and at the period of subsequent exacerbations; they are then led to scratch or rub the head with different degrees of force, when a whitish powder is detached, consisting of minute epidermic squamæ. The secretion of these goes on continually, and a quantity may at all times be detached by rubbing with the hand, or the action of a brush. By separating the hair in different places, numbers of small, red, irregular, and very superficial patches may be discovered under the squamæ, disseminated over the surface of the scalp. The skin on these points is shining, dry, and rough to the touch. The red patches, it is to be observed, are only very distinct in those places where desquamation has but recently been established; after having been long affected, instead of being red, the scalp becomes, on the contrary, of a rather dull white in the places affected.

It rarely happens that the inflammation reaches a very high degree of intensity in this variety of pityriasis. I have, however, met with some patients who complained of a feeling of stiffness and tension, of burning heat and insupportable pruritus in the hairy scalp. When this is the case, besides the ordinary attendant epidermic desquamation, there is almost always an exudation of a thin but glutinous fluid, similar to that secreted by surfaces affected with eczema. This matter agglutinates the hair and squamæ into masses, and when the disease continues in this state for a month or two, the head looks as if it were covered with a gray or whitish cap, composed of the hair and an abundance of squamæ matted together, the superficial layers of which, drier and more friable than those that are deeper, have the greatest resemblance in point of colour to the mineral named asbestos (*teigne amiantacée*, Alibert). When an attempt is made to isolate the particular hairs, they are found buried as it were and lost amid scaly masses; and if, by means of pretty strong pulling, a few locks be separated from the mass, they are so strongly agglutinated, and so much mixed up with squamæ, that they still form stiff bundles only to be divided into others of smaller dimensions: the individual hairs can only be separated from each other with extreme difficulty. When the hair is clipped off pretty close to the scalp, after having been softened by means of poultices and fomentations, the skin is found of a rather vivid red on numerous points. The hair is only found detached from a spot here and there: baldness forms no feature in this disease, in which *pediculi* are also much more rarely encountered than in favus.

Whether *pityriasis capitis* consists of a mere furfuraceous desquamation, or of the abestous cap that has been described, it may in either case extend to the eyelids, and occasion the fall of the eyelashes. In young children the disease is most commonly seen on the upper part of the forehead and temples; in the aged it frequently extends to the eyebrows, and when severe, almost uniformly spreads to the face and different other regions of the body. *Pityriasis capitis* is a disease that always lasts long; it may exist for months and even for years. It is known to be approaching amendment when the secretion of furfuræ becomes less copious, and when the serous exudation, when it has taken place, no longer goes on. A new, smooth and shining epidermis is formed when the recovery is complete.

697. *Pityriasis palpebrarum* may also exist alone, and independently of any anterior manifestation of the disease on another region. The only peculiarity presented by this variety is the frequency with which it causes the fall of some of the eyelashes, and the propagation of the inflammation upon the conjunctiva, it differs, and may be distinguished from psoriasis developed on the same parts, by the erythematous look of its patches and flimsiness of its squamæ, which contrast strongly with the papular elevations that announce the development, and the thick squamæ that afterwards characterize psoriasis.



698. *Pityriasis labrum*, is a variety that has hitherto been confounded with psoriasis, a disease, however, from which it differs in being evolved on the lips and surrounding skin, not as papular elevations, followed by thick squamæ, but under the semblance of minute red stains, to which succeed a general redness and a continual desquamation of the epithelium of the lips, and occasionally of the cuticle of the neighbouring skin. The desquamation goes on in the shape of little thin and transparent laminae, very similar to portions of the healthy epidermis dried, or of the epidermis whose inner surface has imbibed a little serum previous to its desiccation. The lips, in this state, are affected with heat and tension: the epithelium gets yellow and thickened, it then cracks, and falls off in laminae of considerable size. It frequently happens that these continue to adhere for some time by their centre, when their edges are loose and already dry, so that a new epidermis is formed under the one about to be detached before it falls; this new cuticle then grows yellow, cracks, peels off, and falls in its turn, to be succeeded by another which undergoes the same changes and shares the same fate. This is always a long continuing and obstinate affection; every now and then it gets worse than usual, when the lips look swollen and of the brightest red. It is very different from that transient inflammation to which the lips are subject, attended with chapping and the detachment of the epithelium, which is induced by exposure to cold, or happens as a consequence of different acute diseases; this slight affection soon passes, whilst true pityriasis is always a lengthy and troublesome disease. The causes of *pityriasis labrum* are frequently obscure; I have observed it in two individuals, great talkers, who had a trick of always biting their lips.

699. *Pityriasis palmaris* and *plantaris* are varieties which have hitherto been confounded with psoriasis affecting the palms and soles. The two diseases, however, may be distinguished by the following circumstances: Psoriasis begins in the shape of papular-looking elevations, the summits of which are soon afterwards covered with dry squamæ of a dull white colour; pityriasis, on the contrary, commences as small red spots or stains, irregular in their outline, which spread, and before long acquire a yellowish hue, probably in consequence of a slight exudation from the corion, which thickens the epidermis, by penetrating its inner surface. The epidermis then dries, cracks, and is constantly peeling off in foliaceous lamellæ; this exfoliation may extend to the fingers, and even take place under the nails, which are then occasionally detached. The skin almost always appears bathed in perspiration around the diseased points, which, on the contrary, are uniformly dry. I once attended a patient in whom this squamous affection appeared in the soles of the feet, a year after having attacked the palms of the hands. The heel and anterior part of the sole of the foot were painful when the erect posture was assumed, and during the act of walking.

700. I have observed the *inside of the mouth* affected with chronic inflammation and habitual desquamation of the epithelium, especially about the base of the tongue, without any antecedent or concomitant affection of the pharynx, stomach or lungs,—*pityriasis oris*. This state continued during five or six years with but brief intermissions, the principal functions being all the while performed with great regularity. At the time a desquamation of this kind was going on, one patient complained of heat, and often of painful sensations, difficult to define, in the interior of the mouth. In a woman who was similarly situated, almost the whole of the mucous membrane of the mouth was habitually of a grayish-white colour, and when the epithelium was thrown off from the tongue, its surface presented several patches of a bright red colour, which continued until the investing membrane was either formed anew, or again rendered thick and opaque.

701. The *prepuce* in the male and *labia majora* in the female are also occasionally the seat of superficial chronic inflammations which cause exfoliations of the epithelium, and an increase in the secretion of the follicular fluids; several of these affections in their course, their principal phenomena, and their rebellious character bear a singular affinity to pityriasis.

702. *Causes*.—*General* pityriasis is happily a disease of rare occurrence; I have observed it more frequently among women than men; patients are commonly altogether at a loss for any cause to which they can assign their disease. The causes of *local* pityriasis are also,

for the most part, very obscure. It appears occasionally to be excited among men by the action of the razor on the chin. The repeated action of a rough comb or hard brush may possibly conduce to its development on the hairy scalp.

703. *Diagnosis*.—The natural exfoliation which frequently takes place from the skin of the infant, a few days after its birth, is of too short a duration, and appears under circumstances too particular to be confounded with pityriasis. The *scurf* of the scalp, often observed at the period of birth, is formed by a hard, yellow, and friable matter deposited on the anterior and upper part of the head, and bears a much stronger resemblance to an incrustation than to an exfoliation of the epidermis. This scurf, indeed, continues without any appearance of desquamation for many months, unless it be got rid of by the aid of fomentations or other applications that soften and permit it to be removed; it no more consists, in fact, of the epidermis, altered and dried, than the scurf which is sometimes observed on the scalp of elderly individuals negligent of personal cleanliness.

The skin of the scalp and of the extremities in some adults, and especially in some aged persons, is occasionally affected with an *habitual exfoliation* of the epidermis, which differs essentially from pityriasis by being attended with neither redness, heat, nor any other morbid sensation. Certain desquamations of the epidermis, also, which follow acute diseases, differ essentially from pityriasis in their origin and transient nature. The desquamation, or rather the exfoliation of the cuticle that happens in pityriasis, differs in its character from that formation of squamæ which takes place in all the varieties of psoriasis, inasmuch as the cuticle, in the latter disease, is thickened, dry, rough and of a dull white colour. But the feature that distinguishes these two diseases from each other, more than any other, is the circumstance of the red patches of psoriasis always rising above the level of the general integument, whilst those of pityriasis are not at all prominent. Further, when the inflammation runs very high in pityriasis, the skin, especially when scratched, is very apt to pour out an abundant serous secretion, whilst in psoriasis it always continues dry. Lastly, in *acute* pityriasis the subcutaneous cellular tissue is often swollen and painful over a large extent of surface, a circumstance which never happens in psoriasis *discreta*, and which, in psoriasis *inveterata*, is only observed to occur in limited spaces. The heat and pruritus that accompany pityriasis are, moreover, much more troublesome than the same phenomena in psoriasis; and pityriasis, when general, is much more frequently complicated with symptoms of constitutional disturbance and derangement of the digestive functions than psoriasis.

When pityriasis is compared with lepra the same points of difference are detected, with two distinguishing features in addition; the circular form of the patches of lepra, and their mode of recovery from the centre towards the circumference. The detachment of the cuticle in ichthyosis is not preceded by redness or morbid sensations of the skin. The desquamation that follows chronic lichen and eczema is preceded by the evolution of papulæ and vesicles. I shall by and by have occasion to contrast pityriasis with acrodynia and with pellagra, but I must here pause to expose the characters that distinguish it from chloasma (*pityriasis versicolor*, Willan), and from melasma (*pityriasis nigra*, Willan), diseases which I have felt called upon to transfer to another order, that, namely, of the adventitious *pigmentary discolorations*. In the first place, the most striking feature in the two diseases, last mentioned, is undoubtedly the change of colour presented by the skin; further, if some degree of desquamation does take place at one period in the progress of these diseases, an habitual and abundant exfoliation of the cuticle forms no point in their history. Neither is there any of that serous exudation which I have mentioned when speaking of acute pityriasis; lastly, the ease with which chloasma is cured, and the deplorable resistance of pityriasis, in almost every instance, to remedial measures of every kind, show an essential difference in the nature of these two diseases. As to melasma (*pityriasis nigra*, Willan), when desquamation has once taken place, it seldom happens that this phenomenon and the other symptoms of the disease return with any intensity, or prove of any duration (*Vide* Chloasma, Melasma).

704. *Prognosis*.—*General* pityriasis is one of the most obstinate diseases of the skin. When the inflammation extends to the lining



membrane of the internal passages, it always proves, like that affecting the outer integument, very rebellious; in one case I have even seen it end fatally. The whole of the *local* varieties of pityriasis, particularly that of the lips, are constantly very difficult of cure, and are subject to frequent returns.

705. *Treatment*.—When, in *general* pityriasis, the exfoliation from the epidermis is great, and when the skin looks vividly red and pours out an abundant serous secretion from various places, when the subjacent cellular membrane is swollen and the heat of the surface is increased, blood-letting, combined with the temperate mucilaginous bath, the antiphlogistic regimen and diluents, seldom fails to give considerable relief, at least for a season, a circumstance, however, which should not induce the neglect of this, the most important of these measures, when the patient appears able to stand it. The inflammatory affections of the bronchi, bowels and genital organs which occasionally make their appearance in the course of pityriasis, and especially at the periods of its paroxysms, are also relieved by the detraction of blood; but they do not yield with the same readiness to this practice as the inflammation which is induced in these parts by external and appreciable causes. It would therefore be wrong to attempt to cut short these inflammations by the severest antiphlogistic means and repeated blood-letting. After a first or a second bleeding, which may have been very decidedly beneficial, a third generally appears to have no influence in modifying the disease: it is even seen occasionally to return with all its original violence a few days after a freest use of the lancet. Another circumstance which ought to be noted is that the blood is often buffy in this disease, and continues so, unmodified by repeated venesections, during its whole course.

In *acute general* pityriasis, *opium* is often employed with advantage to procure sleep and lull the pruritus and heat of skin so much complained of; this is also one of the best medicines we possess for combating the obstinate diarrhœa that occasionally comes on in the course of the disease. Purgatives and the preparations of *arsenic* cannot be prescribed with the same propriety in this as in the generality of the squamous inflammations, pityriasis being much more frequently associated with gastro-intestinal disturbance than any one of them, and this is a state which these medicines are apt to induce, and one which they would certainly aggravate did it already exist. Simple baths, emollient topical applications, and the vapour-bath prove more generally useful than the sulphureous or alkaline bath, both of which are contra-indicated when the skin is of a vivid red and the subjacent cellular substance is painful and swollen. When the skin, however, scarcely looks coloured under the epidermic lamellæ, the vapour-bath and douche may be administered with advantage. But it is with *general* pityriasis as with almost the whole of the chronic diseases of the skin that are independent of appreciable causes,—a solid and enduring cure is only to be obtained by a general change of the constitution, brought about by dietetic means long and regularly pursued, effected naturally by the progress of years and the modifications undergone by the organization, or accidentally induced by some intervening disease, such as measles, scarlatina, &c.

The *local* varieties of pityriasis frequently prove very rebellious also; yet that of the hairy scalp of infants at the breast occasionally gets well spontaneously or by mere attention to cleanliness, after several months continuance. The variety of pityriasis *capitis* which attacks adults and the aged, and is characterized by a simple powdery exfoliation of the epidermis and pruritus, without serous discharge and matting of the hair, only requires attention to cleanliness, and the application from time to time of some soothing unguent. The severer variety, however, which occasionally occurs along with general pityriasis, but which may also exist alone, and is denominated *teigne amiantacée* by French writers, requires more active treatment. After having softened the mass of dried exudation, hair and squamæ, by means of poultices, vapour-baths, &c., the hair must be clipped off as near to the skin as possible with scissors curved on the flat. The vapour-douche must then be continued, and may be alternated with alkaline lotions; purgative medicines should next be cautiously tried; and whenever symptoms of excitement appear, when the scalp becomes of a bright rose colour in several places, and appears moistened with a serous exudation, leeches should be applied behind the

ears. In a case of pityriasis of the lips, I have detailed the routine of treatment usually pursued. The white precipitate ointment and vapour-douche are the means which have generally appeared to me most efficient in curing pityriasis of the palms and soles. Pityriasis of the mouth, nipple and genital organs have as yet been too little studied to admit of any thing like a satisfactory view being given of the value of therapeutic means in regard to them. (a)

#### *Historical Notices and particular Cases.*

706. The Greek physicians have rather hinted at than described *pityriasis*. Galen<sup>1</sup> entitles those persons *πυρράδες*, *furfurosi*, *quibus asidue furfures in capite gignuntur*. Alexander Trallianus, and Paulus Ægineta<sup>2</sup> tell us that *pityriasis* consists of slight or furfuraceous exfoliations of the epidermis. Several of the translators of the Greek writers have Latinized the word *pityriasis*; others have rendered it by *porrigo*, and have thus committed an error which they might have avoided by translating *pityriasis* by *furfures*, *capitis farrea nubes* as Quintus Serenus Sammonicus had already done. Celsus, in truth, having under the title of *porrigo* comprehended several diseases frequently evolved on the hairy scalp, which were described at a later period under the common name of *tinea*, the word *porrigo* from this time forward occurs with two different meanings attached to it; by some, such as Lorry and Jos. Frank, it is used to indicate the pityriasis of the Greeks: “Desquamatio epidermis nullo prævio aut præsententi cutis vitio originem debens, relicta abnormi pellis subjacentis conditio *Porrigio* dicitur” (J. Frank); a definition in which various epidermic exfoliations, independent of an inflammatory cause, are evidently included; whilst others, Willan, Bateman, &c., have used the word *porrigo*, in the acceptance of Celsus, to designate the diseases very commonly entitled *tinea*, and which are but varieties of *impetigo*, *favus*, &c., induced by peculiarity of situation. The *alvarati* of Avicenna appears to correspond to the pityriasis of the Greeks:—“Est, modus excorticacionis levis accidentis capiti propter corruptionem accidentem in complexionem proprie cum impressione in superficie cutis.” Alibert has given a representation of pityriasis under the title of *dartre furfuracée volante*. Willan, as I have already had occasion to mention, has described under the names of *pityriasis versicolor*, and *pityriasis nigra*, two alterations of the pigmentary body which I have detached from this group. Jos. Frank, in his description of *porrigo*, has included the *pityriasis palmaris*, *scrotalis*, and *diffusa* of Willan. Other writers have described, under the name of *pityriasis* or *porrigo*, the furfuraceous desquamation consequent on lichen of the face, &c. These various meanings attached to the word *pityriasis* have caused no small amount of confusion in the writings of authors otherwise commendable.

There is a case detailed by Marcellus Donatus,<sup>4</sup> and quoted by Schenckius, which appears to be one of general pityriasis. The case published by Hoepfner<sup>5</sup> also appears to me to correspond to this disease; and yet the changes undergone by the skin on different parts of the body in this case bore a different appearance from those commonly observed in *pityriasis*; thick and yellow-coloured incrustations, for example, are stated to have occurred in some places, and in others red and excoriated patches, sprinkled over with reddish points, appearances very similar, therefore, to what are seen in *impetiginous* eczema. Forestus<sup>6</sup> and Mercurialis<sup>7</sup> have treated at considerable length on *pityriasis* or *porrigo*. Roederer<sup>8</sup> has published a dissertation upon

(a) In the chronic stages of *pityriasis*, the treatment will differ but little from that recommended in *psoriasis*; and the various remedies recommended in the latter, may be had recourse to in the present disease. My favourite wash of the fluid chloride of soda, will be found one of the best topical applications.

<sup>1</sup> Galeni. Comment. iii. in lib. vi. Epid.

<sup>2</sup> Alexander, lib. i. cap. 5.—Pauli Æginetæ, lib. iii. cap. 3.

<sup>3</sup> Avicennæ, lib. iv. Fen. 7, Tr. 2, cap. 24.

<sup>4</sup> Marcel. Donatus, lib. i. cap. 3. Hist. Med. Mirabilis.

<sup>5</sup> Hoepfner. Disq. de herpetis furfuracei universalis maligni casu memorabili, 8vo. Berolini, 1815.

<sup>6</sup> Forestus, lib. viii. obs. 12–13.

<sup>7</sup> Mercuriali. De morb. cutis, cap. 7, de porriginis, p. 31.

<sup>8</sup> Røederer. Diss. de porriginis. Gætt., 1262.



this subject which I have had no opportunity of consulting. Several observations on pityriasis are to be found in different periodical publications.<sup>1</sup>

CASE CXIX.—*General pityriasis; complications.* Martha Mullet entered the Hôpital St. Antoine, January 19th, 1828, on account of rheumatism confined to the joints of the right foot, and while there was attacked with a squamous inflammation of the skin. The catamenia had disappeared in the 48th year of the patient's age, without any unpleasant symptom. In the course of the month of February the skin of the face was observed to be the seat of a number of small red spots or stains, which speedily became covered with minute squamæ, and the affection spread so rapidly that within a few days it had involved a very large portion of the trunk. The disease began in the points corresponding to the follicular eminences, as very small solid red elevations, the bases of which were surrounded by a narrow rosy circle; the skin of the parts affected acquired, in this way, a general rosy tint. These elevations were soon covered on their summits with a very small, thin, and whitish scale, which was readily detached. Some redness remained even in those parts where the eruption was of oldest standing, and there the heat of the surface was sensibly increased; generally, however, it was almost entirely concealed by furfuræ of a dull white hue, which in several places even formed a layer of some thickness, the external surface of which was detached in the form of powder. The arms at the same time, became affected in a similar way, especially on their outer aspects, where the squamæ were from four to five lines in diameter, much larger than those of the back, and of a more regularly rounded figure. The scalp, also, and those parts of the face which had escaped in the first instance, were affected, by and by, with an eruption of red spots which were succeeded by squamæ. The backs of the hands, and those parts upon which the body rested, when laid horizontally on the back, the usual posture of the patient, became covered with squamæ of great comparative thickness, under which the skin was of a more vivid red than on any other point. On the knees the appearance of the eruption was nearly similar, only the squamæ were even thicker; they also projected slightly, and the portions of the integuments they covered were of a still more fiery tint than elsewhere. Several months afterwards the desquamation extended to the points of the fingers, the exfoliation taking place there in large flaps, the whole cuticular covering of the pulps being thrown off in a single piece; under the nails there remained for a very long time a substance of a yellowish-white colour, which by scraping was detached in the form of furfuræ. The different appearances that have now been detailed continued without remarkable change till the month of December, when the cold, rather than the medical treatment, seemed to produce some slight improvement. The squamæ and hair, however, became matted together by means of a glutinous exudation, and acquired a glistening appearance like *asbestos*. The hair, when parted in different places, showed the surface of the scalp of a vivid red colour, and beset with a multitude of minute orifices whence the serous agglutinating fluid was discharged. The patient, since the commencement of the disease, has had repeated attacks of profuse leucorrhœa, of colic and bronchitis.

Mild diluents and blood-letting caused some diminution in the redness of the skin and pruritus, with which it was affected; but these phenomena re-appeared within a few days in their original intensity. The salt-water-bath, repeated six times only, seemed but to cause a greater degree of irritation, a more vivid tint, and increased heat of the surface. The tincture of cantharides, in doses of no more than three drops, continued for three or four days successively, occasioned so profuse a diarrhœa, attended with tormina to such a degree, without appearing at all to influence the disease of the skin, that antiphlogistics were immediately resorted to anew, and these seemed to do some good. Gelatinous baths were now prescribed, but without effect; one of the regions was touched with the nitrate of silver, but this application did no good. Arsenic was tried, as a last resource, and the solution of arseniate of soda was prescribed in doses of ten drops, gradually increased to half a drachm; but after the third dose of the latter amount the patient complained so violently of pains in the bowels, and showed so many symptoms of gastro-enteritis that this medicine was abandoned also. The cold of the month of De-

cember was the only thing that seemed to do any good; the disease has since remained unmitigated, and will probably continue so indefinitely.

CASE CXX.—*General pityriasis. Chronic enteritis.* Madame D\*\*\*, aged sixty-one, of good constitution, born of healthy parents, and herself the mother of six lively children, was always very regular until the age of forty-eight, when the catamenia disappeared entirely. Two years afterwards the patient had first a violent pain in the left knee, and within two days perceived a vivid redness, attended with extreme itchiness in her left groin, from the skin of which the cuticle soon began to crack and be thrown off. This disease of the integuments spread rapidly, and ended by implicating the whole body except the palms of the hands and soles of the feet. In this state the disease continued for six years; it then improved, and ultimately got well under the use of the warm-bath and diluents. Within a year, however, the patient had a relapse. Bathing and leeching did no good now, and Madame D\*\*\* entered La Charité, March 3d, 1834, labouring under general pityriasis, which had already continued for upwards of three years. At this time the lower extremities were hard and swollen, pitting under the pressure of the finger. They were covered, principally on their outer aspects, with largish squamæ, which were readily removed by simple friction. The parts of the skin that had been freed in this way, looked red, and a plentiful serous exudation, similar to that of eczema, began to be poured out. On the arms, the same state obtained, the squamæ being very large on the outer aspects of the limbs. On the abdomen, desquamation in a less degree was going on, the squamæ being furfuraceous; on the loins, however, they were as large as on the extremities. The forehead was the part of the face most severely affected; the ears were also covered with squamæ, and quite moist from the abundant serous secretion. The patient suffered greatly from a feeling of heat in the whole surface of the skin, and of a pruritus that occasionally became excessive; she then scratched herself severely, deriving the utmost enjoyment from the operation, after which the skin became extremely red, and poured forth an abundance of the serous fluid.

This patient had, in addition, long suffered from diarrhœa; her colour was pale and sallow; in other respects she was well. Simple bathing, the vapour and sulphur bath, the nitric acid, decoction of dulcamara, blisters, and blood-letting, both general and local, modified the state of the skin in some slight degree: the desquamation became less abundant; but when the patient was discharged on the 8th of May, she was still suffering from diarrhœa, which neither regimen nor opiates had been able to check, and on the whole the disease of the skin remained much in the same state as it was when she entered.

CASE CXXI.—*General pityriasis; diarrhœa; subcutaneous abscesses: death.* Marie Paul, aged twenty-two, had long been subject to a *tetter*, which every now and then assumed the acute type, and principally affected the parts behind the ears and the bends of the arms. Some time in the month of July 1831, the patient had to contend with serious moral afflictions, and shortly afterwards she observed that the whole surface of her body had become red, and was affected with a desquamation incessantly renewed. The digestive functions were disordered at the same time, and the patient felt generally unwell. On entering the Hôpital de la Charité on the 27th September, 1831, almost every part of the surface was found affected with pityriasis; the face is entirely covered with the eruption; but around the ears and eyelids, which have lost their ciliæ, and are inflamed on their edges, the skin is red and moist, and the disease there presents the characters of acute eczema, without a trace of desquamation; from the cheeks, on the contrary, the epidermis is detached in flaps of extreme thinness, and of different sizes, exposing a smooth and slightly moist surface. The skin of the neck only looks cracked transversely in different places. On the arms, breast, belly, thighs and legs, a nearly similar state of affairs obtains: the epidermis is incessantly falling off in irregular shreds, which are transparent and rather soft, from being moistened with the serous exudation that is everywhere poured forth from the red diseased surfaces underneath. When the body of the patient is handled for some little time the fingers become moist and clammy.

<sup>1</sup> Journ. Hebdom., t. vii. p. 459.—Revue Médicale, Juin, 1830, p. 317.



To these cutaneous affections are superadded pain of the epigastrium; quick and compressible pulse; tongue red at the point, loaded in the centre; diarrhœa; insomnia, or disturbed sleep; want of real appetite; loaded and scanty urine. (*Rice-water with gum for drink; gummy potion, with half an ounce of syrup of poppies; beef-tea and milk; six leeches to each side of the neck; emollient cataplasms; bath at 28 R.*) The patient was so weak that she could not continue in the bath for any length of time. The skin generally is red and moist; the desquamation goes on; the febrile symptoms increase in severity; the epigastrium is more painful. (*Eight leeches to the epigastrium; mucilaginous drink; demi-lavement.*) 28th.—Matters going on still more unfavourably; the patient was ordered to lose four ounces of blood from the arm; but little, however, could be obtained. 30th.—A second attempt to bleed the patient was not more successful than the first, on account of the small size of the veins. Oct. 1st.—A number of small superficial abscesses were discovered, several of which were seated in the substance of the skin, whilst others, of somewhat larger size, extended into the subcutaneous cellular tissue, and presented an evident fluctuation. Some of them were opened, others, by reason of the opposition of the patient, were left to themselves. The patient exhales a fetid odour, which becomes more powerful every day, so that the nurses now approach her with great reluctance. Her state gets more deplorable every hour; the diarrhœa continues; she is greatly emaciated; the beat of the heart is rapid and feeble; the respiration quick and short, &c. She died on the night of the 5th. On opening the body ulcers, and other alterations characteristic of chronic inflammation of the intestines, were discovered.

707. I here subjoin two cases from the Philosophical Transactions, in which the general and habitual desquamation to which the skin became subject, was preceded by fever, and other serious symptoms, after which appeared a general eruption of red spots. These cases differ from those I have just detailed in the circumstance of the general desquamation being renewed after a fresh febrile attack, without any new eruption. In ordinary pityriasis, as we have seen, the desquamation goes on incessantly, and is not got rid of but with great difficulty. These cases of desquamation, however, differ from those that take place consecutively to exanthematous fevers, in having been habitual and frequently repeated. There is another case, similar to these two in its circumstances, detailed in the Ephemerides Naturæ Curiosorum,<sup>1</sup> and a fourth has been related by Mr. Newell,<sup>2</sup> which got well under the use of the Cheltenham waters continued for several seasons. I am anxious to direct attention to these cases, which present such remarkable discrepancies from those of common pityriasis. They appear to form a kind of transition link between this disease and the eruptive fevers. Cases of this kind are not yet sufficiently numerous to allow of their being thrown together into a particular group; but I have given several a place here with a view to their perhaps being made the basis of an arrangement that will one day become more precise.

CASE CXXII.—*Case of general desquamation of the cuticle, particularly of that of the hands.*<sup>3</sup> Mr. W. Wright, about fifty years of age, was first seized about ten years ago with a singular kind of fever which has returned many times since, even twice in the course of the same year, attended with the same symptoms and circumstances, appearing generally to be brought on by obstructed perspiration, in consequence of catching cold. Besides the common febrile symptoms upon the invasion of the disease, his skin itches universally, more especially at the joints, and the itching is followed by many little red spots with a small degree of swelling; soon after his fingers become very stiff, hard, and painful at the ends, and at the roots of his nails. In 24 hours, or thereabouts, the cuticle begins to separate from the cutis, and in 10 or 12 days this separation is general, from head to foot, when he has many times turned the cuticle off from the wrists to the fingers' ends, completely like gloves; and in the same manner also to the ends of his toes; after which his nails shoot gradually from their roots, at first attended with exquisite pain, which abates as the separation of the cuticle advances, and the nails are

generally thrown off by new ones in about six months. The cuticle rises in the palms and soles like blisters, but has no fluid under it; and when it comes off, it leaves the subjacent skin very visible for a few days. Sometimes, upon catching cold, before he has been quite free from febrile symptoms, he has had a second separation of the cuticle from the cutis; but then it is so thin as to appear only like scurf, which demonstrates the quick renewal of this part.

CASE CXXIII.—*Repeated attacks of general desquamation of the cuticle.*<sup>4</sup> Mr. A. B., aged thirty-five, enjoyed good health till about his thirty-fifth year; his business, as a miller, and maker of French barley, exposes him to a great heat and clouds of dust. On the first cold caught, after entering on this employment, a fever attacked him, and this has returned once, and sometimes twice, a year, chiefly in the autumn, attended with a loosening and detachment of the cuticle. The disorder begins with violent fever, attended with pains in the head, back, and limbs, retching, and vomiting, the skin being dry, the tongue furred, the thirst urgent, bowels constipated, and urine high-coloured. The whole surface of the body then, usually, but not invariably, became yellow; it afterwards became florid, having the appearance of a rash; on which he felt a great uneasiness for several days, with a numbness and tingling all over him, when the urine began to deposit a thick sediment. About the beginning of the third week from the first attack, the cuticle appeared elevated in many places, and in eight or nine days afterwards it became so loose as to admit of being easily removed in large flakes. The cuticle of the hands, from the wrists to the fingers' ends, came off whole like a glove. The patient was never disposed to sweat, and when this was attempted to be forced he grew worse; nor was he much at ease till his urine deposited a sediment, after which he felt but little inconvenience but from the rigidity of his skin. The nails were not detached, as in the preceding case.

CASE CXXIV.—*Pityriasis of the lips.* M. D \* \* \*, aged thirty-six, has suffered for the last fifteen years with a pityriasis of the lips; the disease is confined to the coloured parts, and has never spread either to the skin without, or to the lining membrane of the mouth within. The epithelium becomes hard and dry, cracks, and is detached in small shreds, so that in the course of four or five days it is completely renewed over the surfaces affected. Whilst the desquamation is going on, the lips are stiff, and the patient keeps moistening them with his tongue. The affection is most troublesome in winter, when it is more constantly attended with chaps than at other seasons. M. D \* \* \* is in the habit of talking much, and with his voice pitched high; he, himself, attributes his malady to a practice he has long indulged in of biting his lips; he also suffers from a kind of tic before each renewal of the desquamation. He has, from the beginning, tried a host of remedies against his distemper—common cerate, cucumber ointment, the *pommade de Regent*,<sup>5</sup> and even that of *Frere Côme*,<sup>6</sup> the latter only inflamed the lips and made them very painful. Some time afterwards, the lunar caustic was tried; and the parts affected were subsequently touched with a muriatic acid liniment, which irritated them anew, in a very distressing manner. M. D \* \* \* also tried lotions of the natural sulphureous waters of Barèges, but all proved futile, and the patient returned to the use of simple cerate, his lips remaining subject to an habitual desquamation. A great variety of internal medicines were also tried, without any one of them appearing to exert the slightest influence on the progress of the disease. These details M. D \* \* \* gave me when he consulted me in the winter of 1823. I recommended him to keep his lips anointed for a fortnight with an ointment of the acetate of lead; this application, which seemed at first to make the desquamation less frequent, and less extensive, failed at length, like every thing else, in giving relief. I then desired the patient to apply three or four leeches, repeatedly at intervals, to the inner surface of the lips; but he showed a repugnance to this measure, and I did not recommend any other. M. D \* \* \* has never suffered from an attack either of psoriasis, or of any chronic inflammation of the skin of a different nature, on any of the other regions of the body.

<sup>1</sup> Misc. Acad. Nat. Cur., Dec. 5, an. 5, 1686, p. 396. (Abcedens post morbum epidermis.)

<sup>2</sup> Lond. Med. Gaz., vol. iii. p. 576.

<sup>3</sup> Latham, in Phil. Trans. vol. 60, p. 451.

<sup>4</sup> B. Gooch, in Phil. Trans. vol. 59, p. 281.

<sup>5</sup> A mercurial salve.

<sup>6</sup> An arsenical preparation.—Tr.



## SQUAMOUS INFLAMMATIONS ARTIFICIALLY EXCITED.

708. Squamous inflammations, arising under the influence of accidental excitement, differ from those we have just been engaged in considering, in their natural tendency towards recovery when not kept up by the constant action of the cause which has produced them.

709. The irritation caused by an indifferent razor occasionally produces a degree of redness in the skin, followed by desquamation, which has been classed with the pityriases. This trifling complaint disappears entirely when the skin is no longer subjected to irritation.

710. A squamous inflammation is frequently observed on the backs of the hands of grocers, and those persons who handle alkalies, spices and other stimulating substances; the skin looks red, slightly puffed, and squamous, and is commonly traversed by dry and painful chaps, more especially across the joints between the metatarsal bones and phalanges, and between the carpus and bones of the forearm. This affection is speedily cured by a change of occupation, or by keeping the hands for a time from the action of irritants. Eruptions of the same kind are occasionally observed among bricklayers, masons, engravers, &c.

711. Washerwomen are also frequently attacked with a squamous inflammation of the hands, and lower parts of the arms, excited by the prolonged immersion of these parts in water, and especially in alkaline leys. The parts become habitually red, and covered with a hard, dry and brittle epidermis, which falls off and is renewed incessantly. Those individuals whose hands are still more constantly kept plunged among irritating fluids, above all dyes, are subject to redness and swelling of the hands, with numerous deep fissures of the epidermis, which is always coming off in shreds. These chaps are frequently seen impregnated with colouring matter which cannot be got rid of by washing; they also frequently penetrate to the quick, and the pain and swelling they occasion, attended with stiffening and impediment to the motions of the hand, are often extremely troublesome. These latter varieties of squamous inflammation disappear like the others by a simple removal of the cause to which they are due; they get well much more slowly, however; the skin being swollen, and as it were hypertrophied in its entire thickness, so that it has lost its natural pliancy. The state of chronic inflammation of the integument seems also to be kept up in part by the irritation of the numerous chaps with which it is affected.

712. The nature of the whole of these accidental inflammations of the skin is to be distinguished by their causes, which patients almost always mention. They also differ from diseases of the same class induced by a morbid internal cause, in their mode of appearance; they are, in fact, simple diffuse chronic inflammatory affections of the skin, whilst lepra and psoriasis begin as papular elevations, and pityriasis as small red spots or stains upon the surface of the healthy skin. Further, lepra and psoriasis are evolved by the growth and multiplication of *circumscribed patches*, whilst the accidental squamous inflammations extend generally and irregularly. Lastly, these affections differ from pityriasis in this:—that they commonly cause more stiffness and chapping of the skin, and are occasionally attended with accidental vesicles and pustules.

lupus, cutaneous scrofula, cancer, Greek elephantiasis, tubercular syphilis, and accidental and artificially excited tubercles. Some pathologists are of opinion that lupus and cutaneous cancer do not always begin as tubercles; they have not, however, given any exact account of the forms under which they suppose that these two diseases may begin. I think it almost unnecessary to observe that this group of diseases is very different from that which Willan and Bate-man have designated under the name of *tubercles*, which includes alterations of the most dissimilar description, such as carbuncle, warts, rosacea, elephantiasis, furuncle and lupus.

715. Tubercles, whatever their nature, are occasionally solitary, but much more frequently numerous. They begin in the shape of flattened elevations, larger and harder than papulæ, and frequently of the same colour as the healthy skin that surrounds them; or they first appear as spots of a reddish colour. Tubercular affections are almost always chronic in their character; they may continue stationary for many months, and even for several years; but when accidentally irritated, tubercles are apt to increase in size, and to undergo different alterations. At a later period they soften or are destroyed by an *ulcerative* process, becoming covered with scabs when the sore is exposed to the air. These changes have distinct characters peculiar to each of the tubercular diseases. In relation to their origin, nature, appearance, progress and termination, the tubercles of lupus, scrofula, cancer, Greek elephantiasis and syphilis, have, in reality, nothing in common save their form; and although much more restricted than that of Willan, this group is only to be regarded as an artificial means of facilitating the diagnosis of these diseases.

716. The tubercular diseases at their acme, are in general easily distinguished from all other affections of the skin. Tubercles alone constitute small *solid* organized tumours, having a tendency to ulceration. The smaller dimensions of papulæ, and their essentially pruriginous character prevent them from being confounded with tubercles. As to *tumours*, properly so called, they are distinguished from tubercles in having no disposition to softening or ulceration, and in neither being preceded nor accompanied by any other symptoms of inflammation. When tubercles are partially or wholly destroyed, the *sores* and *scabs* which succeed present particular characters which are sufficient not only to separate these diseases from others of a different class, but even to distinguish each of them individually. In each particular case, after having discovered the existence of tubercles, we ought to ascertain whether they are *primitive*, or are *consecutive* to some other elementary form of disease, as also, whether they are *natural* or have been *artificially* excited. Tubercular diseases are always very serious in their tendency, and extremely difficult of cure.

717. In the body of this work I have intentionally omitted any account of several exotic diseases which show themselves in a tubercular form; in the attached vocabulary, however, some notice will be found taken of them. (Vide *Frambæsia*, *Radesyge*.)

## LUPUS.

Vocab. *Lupus*, *Noli me tangere*.

718. Lupus is a chronic cutaneous inflammation which usually appears in the shape of external tubercles of different sizes, singly or in clusters, of a livid colour and indolent character, followed either by ichorous and phagedænic ulcers, which become covered with brownish, and usually very adherent, scabs—*lupus exedens*; or by extensive changes in the structure of the skin, but without preliminary or consecutive ulceration—*lupus non exedens*. This disease may be confined to the face, and even to one of its parts, or may attack at once, or in succession, several regions of the body. The two varieties, which have been indicated, are very distinct in their external appearance, and to a certain extent in their mode of treatment. (a)

(a) The following paragraphs indicate the view which M. Bielt takes of lupus. "This disease has been described under the name of *dartre rongeante*, by Alibert, who has divided it into three varieties, based on the causes which produce them: 1st. *Dartre rongeante idiopathique*; 2d. *Dartre rongeante scrophuleuse*; 3d. *Dartre rongeante*

## IX.—TUBERCULA. TUBERCULAR INFLAMMATIONS.

Vocab. *Tubercula*.

713. The tubercular inflammations are characterized at their height by the occurrence of *tubercles*, or small solid, circumscribed, indurated, and enduring tumours, which, after continuing for some months, often for several years, almost uniformly end by becoming changed in their nature, and falling into a state of ulceration.

714. The number of tubercular inflammations reckoned is six:



719. *Lupus exedens* or *noli me tangere*, is commonly developed on the alæ or tip of the nose. It makes its appearance as a small external tubercle of a dusky-red colour, and hard consistency, whose progress is usually tardy. It sometimes commences as a chronic inflammation of the mucous membrane of the nasal fossæ, with redness and swelling of the nose in general; a thin scab or crust then forms at the opening of the nostrils; this is removed, and a second and thicker one succeeds it—an ulcer has in fact been formed, and soon extends to the alæ of the nose. Under other circumstances a livid or purple tint, and some swelling of the end of the nose, are the first symptoms of the disease observed. The redness increases, a superficial sore is formed, which becomes covered with a scab, and the ulcer extends in depth. It often happens, too, that one of the alæ of the nose swells, grows painful and of a purplish hue; a slight ulcer then forms and becomes covered with a little scab; this the patient commonly picks off, when it is replaced with a thicker one, under which the ulcerative process continues to go on, the scab being found to increase in thickness every time it is renewed; the patient scarcely makes any complaint; the skin, and occasionally the cartilage, are silently destroyed, and an ulcer of a bad character, from which a fetid sero-purulent discharge is poured out, is at length discovered, as if by accident, established under the scab.

The nose is occasionally red on the superficies only, and this in a very equal and regular manner; sometimes instead of being of its ordinary size and shape, the nose becomes pointed, sharp, and tapering, the nostrils tending continually to close. The cartilage at the angle which unites its two lateral halves superiorly, seems then to project, and presents a red tint that is even perceptible through the soft parts.

The ravages committed by this disease vary extremely; almost the whole of the nose disappears in one instance, and the point only suffers a little in another, in which case it often looks as if a piece had been removed with a cutting instrument. When such ulcers have been arrested and healed up, new tubercles occasionally form on or near the cicatrices, and the parts which had been spared originally may be entirely destroyed by a renewal of the ulcerative process; even the whole nose and septum may vanish before its destructive influence. The ulceration may prove rapid or slow in its progress: sometimes after existing for several years, a small portion only of the nose is lost; in other instances, happily of rarer occurrence, the whole of the member is destroyed in from fifteen to twenty days (*lupus vorax*). Sometimes, if the disease is interfered with, it seems to acquire new energy: the point of the nose assumes a livid red colour, which, though it may seem to disappear, returns within two or three days; incrustations, which are attended with acute pain, and grow very thick in the course of a few days, form in the interior of the nasal fossæ, whence a puriform fluid distils, and the point of the nose is then rapidly destroyed. The disease seems every now and then to be advancing towards recovery, when the part that was almost

*venérienne*; this last evidently belongs to the syphilitic complaints, and the author himself describes it under that head.

"*Lupus* is a disease which sometimes commences with spots of a violet red colour, but most generally with livid, indolent tubercles, and is above all characterized by its tendency to destroy the surrounding parts and subjacent tissues, under the form of ill-conditioned, ichorous ulcers, which become covered with very adherent brownish scales, which, on falling off, discover that the disease has continued its ravages.

"*Lupus* presents many differences, not only in its seat, the rapidity of its progress, and the extent of the destruction it produces, but also in the mode in which these ravages are committed, and in the form of the ulceration. Thus, sometimes it confines its attacks to the surface, sometimes it successfully invades the subjacent parts; at others, again, it is accompanied with a real hypertrophy of the skin; hence M. Bielt has divided it into three varieties: 1st. That which destroys the surface; 2d. That which destroys the subjacent parts; 3d. When it is accompanied with hypertrophy. This division is wholly practical, and much facilitates the study and description of the disease."—Cazenave and Schedel, *Practical Synopsis of Cutaneous Diseases*—Philadelphia Translation.

cicatrized, turns to a vivid red, is attacked anew with painful ulceration, and is covered with a thick scab under which the destructive inflammation makes rapid progress.

In *lupus exedens* of the skin of the nose, the mucous membrane of the nasal fossæ is almost always affected with chronic inflammation. In some rare cases, altogether independent of a syphilitic cause, the septum is even destroyed before the outer surface of the nose is implicated. When the destruction commences in the skin, again, it extends to the pituitary membrane, spreads along the nasal fossæ, and is even occasionally reflected over the mucous membrane of the arch of the palate to the gums, which are then deeply furrowed. Besides the destruction, which is discovered when the scabs that have long concealed the mischief wrought by this disease are removed, it is very common to find the openings of the nostrils contracted in a greater or less degree by the thickening of the affected parts, or by the indurations consequent on the formation of cicatrices.

2d. The tubercles of *lupus exedens* are occasionally evolved near the *commissures of the lips*. Thick incrustations cover the ulcers, and the patient cannot open his mouth without pain. After having destroyed a considerable extent of parts about the commissures, the ulcers often extend to the movable substance of the lips, in which case, by the shrinking of the cicatrices when the disease gets well, the opening of the mouth is apt to be considerably diminished.

3d. The *lower eyelid* is occasionally attacked with *lupus exedens*, and the ulceration generally spreads to the skin of the cheeks and to the conjunctiva palpebralis. The eyeball in this case imperfectly protected, inflames, the conjunctiva thickens, the cornea loses its transparency, and by and by becomes so dim that total blindness follows. If the eyelids are not entirely destroyed, the sores in healing cause their eversion; the eyes then appear of twice their usual size, a circumstance which, added to the vivid red of the conjunctiva, produces hideous deformity.

4th. It sometimes happens that one or more tubercles are evolved on the face, which, after continuing long stationary, increase suddenly in number as well as in size. The skin in the spaces between them swells and becomes œdematous in appearance, the tubercles then unite by their bases, and the whole mass falls into a state of *irregular ulceration* of bad character. The sore is covered with a blackish-looking and very adherent scab, and spreads by degree to the neighbouring parts. *Lupus exedens*, in this way, frequently attacks almost the whole of the face. When the ulcerative process stops, cicatrization takes place in the form of irregular white bands, which stretch from the parts where the mischief began to those in the vicinity, and are very similar in their appearance to the cicatrices that result from extensive burns.

5th. *Lupus exedens* occurs with symptoms of still greater severity. Whilst it is advancing among parts still untouched, it returns and attacks the cicatrices, whether of old or recent date, which have resulted from its previous existence. These disappear very rapidly, and fresh tubercles, developed like a hard, rough, and swollen band around them and the ulcers that exist, become open before long and add to the havoc going on. In the course of a few months the disease may thus ravage not only the greater part of the face but a large extent of the surface of the neck. The nose is frequently implicated in the destruction, and when the scabs are detached, the alæ or a portion of its end is found gone. When, by means properly directed, the progress of the disease is arrested, the skin, beset with numbers of small, red, and scallow tubercles, becomes covered with minute squamæ, and white and firmer cicatrices ere long succeed upon the ulcerated points. When the ravages of *lupus* have been thus extensive, the face is seamed with irregular cicatrices, often of a dull white, but occasionally of a rosy red colour, tense, shining, pretty thick in some places, but so thin in others that they appear transparent and on the point of giving way. This latter character they present especially on those parts that have been oftener than once attacked. These cicatrices seem frequently to hold by their extremities to two different tubercles, between which they stretch like lines of communication. They often appear covered on various points of their circumference with blackish incrustations, which, however, are commonly soon detached.

6th. *Lupus exedens* rarely attacks the integuments of the chest, or



of the extremities; these regions are more frequently the seat of the *lupus non exedens serpiginosus*.

7th. Lastly, in one variety of *lupus exedens* the ulcers are beset with small, soft, red and spongy-looking and very prominent *tumours*, which occasion much deformity. This variety is one of the most formidable, but it occurs rarely.

8th. *Lupus exedens* often continues for years, committing the most frightful ravages, without the general health appearing to suffer in any degree. Yet, when not only the skin but the cartilage of the nose is rapidly destroyed, some patients show unequivocal symptoms of chronic inflammation of the lining membrane of the stomach, intestines or bronchi, and several even sink under a species of slow fever accompanied with colliquative diarrhœa; such a termination of *lupus*, however, so rarely happens, that when it does occur, it ought probably to be ascribed to an accidental complication, rather than to the influence of the disease itself.

720. *Lupus non exedens*. This variety occasionally presents itself as a single tubercle, of a yellowish-red colour, developed in the substance of the skin,—*lupus non exedens simplex*. I have observed a solitary tubercle, possessing these characters, continue on one of the cheeks in several children for a number of years, and leave; at a subsequent period, a small cicatrice in the spot it had occupied. The disease, however, more commonly begins in the face, as an irregular cluster of little tubercles of a dingy red colour, and a flattened or lenticular form, scarcely rising above the level of the skin. In some cases, they implicate a great portion of one or of both cheeks, of the forehead, and even of the *face in general*. These tubercles do not ulcerate on their summits; and the sores that are occasionally encountered in the circumference of the clusters, are so rare that they must be held entirely accidental. The disease spreads by the formation of fresh tubercles, which spring up near those that already exist, and thus by degrees increase the area of the diseased surface—*lupus non exedens serpiginosus*. The skin and subjacent cellular substance often become affected with an indolent infiltration, and the diseased surfaces look puffy and enlarged. The yellowish-red colour of the tubercles disappears under the pressure of the finger. The patient does not experience any pain; but touching the parts causes uneasiness; and the diseased surfaces frequently become sensible after violent exercise, and indulgence in spirituous liquors. The tubercles begin to shrink in the centre of the group; the skin there grows red, shining, slightly furfuraceous, and subsequently assumes the look of such a cicatrice as is formed after a superficial burn; it is, however, beset with points of a yellow coppery colour, due to the tubercles which, from shrinking themselves, or from the tumefaction of the neighbouring subjacent parts, are brought to the level of the skin. The clusters appear mingled with white points and bands, which are evidently cicatrices, owing to the disappearance of tubercles of another date, and which in vanishing have caused this singular alteration of the integuments. The tubercles of *lupus non exedens* are habitually affected with an epidermic desquamation, which is usually most remarkable around the circumference of the clusters where they are best defined.

The features occasionally become very much enlarged in this disease; the cheeks, soft and flabby, or pasty, preserve to a certain degree the print of the finger, and look as if they were affected with the Arabian elephantiasis. The forehead and eyelids are puffed, and the eyes, covered with hypertrophied masses, seem sunk and hidden in the bottoms of the orbits; the lips, too, are considerably swollen, and often form two enormous, flabby masses, which expose the mucous membrane of their inner surface turned outwards; the ears, in fine, occasionally participate in this general tumefaction of the face. The tubercles of *lupus non exedens* are rarely affected with ulceration; such as does occur is accidental, very superficial, and covered with thin, laminated and but slightly adherent incrustations. This disease continues for an indefinite period; whether left to itself or modified by the action of various therapeutic agents, the affected parts never regain their natural state completely; the tumefaction of the skin and subcutaneous cellular tissue diminishes, the tubercles shrink and disappear, but the skin continues thin, shining, smooth to the touch, and seems to have lost something of its proper thickness.

2d. *Lupus non exedens* occasionally appears on the *extremities* in one or more clusters of small flattened lenticular tubercles, of a

yellow-red tint, changing subsequently into patches of an irregular circular shape, the areas of which are red, furfuraceous, often traversed by prominent bands, whose salient edges are evidently tuberculated, and covered with firmer and thicker squamæ. When this eruption is left to itself, fresh tubercles appear successively in the circumference of the primary clusters, and encroach more and more upon the healthy integument; in this way I have seen the disease extend over the whole of a limb, the arm, for instance, from the shoulder to the wrist. The extremity thus affected, became much larger than the one on the opposite side, and even acquired the dimensions which the same part presents in Arabian elephantiasis. The motions of the elbow-joint were executed with pain and difficulty; the extent of the disease was sharply defined towards the shoulder superiorly, and near the wrist inferiorly, by a tuberculated line covered with squamæ. The skin of the arm and forearm, changed into a kind of indurated tissue of a paler colour than the healthy integument, was puckered or ridged with numbers of bands similar to those that follow burns, and sprinkled over with lenticular spots of a brown and dirty yellow, owing to tubercles that had shrunk or were buried in the substance of this tumid skin. The subcutaneous cellular membrane was infiltrated, and in several places, pitted under pressure. At intervals, variously remote from each other, sometimes under the influence of the deuto-ioduret of mercury exhibited internally, sometimes to all appearance spontaneously, the skin and cellular substance under it were attacked with a low kind of inflammation, attended with some swelling, heat and pain, but without any distinct external redness. A serous exudation then took place from a number of fine pores, or openings which were visible on the surface of almost the whole of the tubercles, and into which the point of a large pin might have been insinuated. This *intervening* inflammation was always followed by a diminution in the size of the extremity, and the dispersion of a certain number of tubercles. I have, however, seen this variety of *lupus non exedens*, disappearing about the shoulder, at the same time that the disease was making rapid advances around the elbow and forearm.

3d. *Lupus non exedens* is occasionally evolved *below the ear*, and on the *nucha*, whence it extends in one instance towards the throat and shoulders, in another towards the occipital region, which it despoils completely of hair.

721. Both of these varieties of *lupus* appear at first sight to be diseases entirely of a local nature. Those who are attacked with them are commonly in the enjoyment of pretty good health at the time; females, indeed, occasionally complain of something like derangement in the periodical discharge, especially when the constitution appears to have a scrofulous taint, and when the disease is of some extent; yet I have known several women who suffered from old and inveterate *lupus* in whom the catamenia had always been regular and pretty copious.

Of all *intercurrent* diseases erysipelas is the one which is most frequently observed along with *lupus*. The occurrence of this inflammation is occasionally to be accounted a lucky accident, especially in the *lupus non exedens serpiginosus*, inasmuch as under its influence a certain number of tubercles are always dispersed, and the whole disease may even be brought to a fortunate conclusion. But it also happens now and then that an attack of erysipelas, even in effecting a desirable modification in the state of the diseased integuments, may be attended with nervous symptoms of such severity as to make its occurrence subject of deep regret. As to the diseases of the skin and other affections which existed previously to the development of *lupus*, the whole, with the exception of scrofula, perhaps, appear to be strangers to its cause.

722. *Causes*.—*Lupus* is happily a disease rather of rare occurrence. It is most generally developed between the sixteenth and twenty-fifth year, and seldom shows itself after the age of forty. Scrofulous children are of all individuals those who are most obnoxious to its attacks; yet it undoubtedly occurs among the robust who have lived in the habitual enjoyment of excellent health. The disease is frequently uninfluenced by the arrival of puberty, and may recur in those who have suffered from it in their youth. It seems to be more common in the country than in towns; and, perhaps, also to attack women more frequently than men. The poor inhabitants of Haute-Auvergne who



live on acrid food, such as old cheese, tainted meats, &c., and house with their cattle, are often attacked with it. The disease is not contagious, and is seldom seen among the better classes of society. Blows, falls, &c., under the influence of which it has seemed occasionally to be developed, can only be regarded as determining and occasional causes of the disease.

723. *Diagnosis*.—Lupus is easily distinguished from rosacea, Greek elephantiasis, syphilitic affections, and the other forms of cutaneous disease that present tubercles, or ulcers covered with incrustations of varying thickness. Scrofula is peculiar to individuals of a strumous constitution; the tubercles, sores, and affections of the bones and lymphatic glands that accompany it have peculiar characters. Further, scrofulous ulcers extend by the detachment of their edges from the subjacent tissues, and the formation of sinuses, in consequence of the softening and suppuration of lymphatic glands, of caries of the bones, &c.; whilst the ulcers of lupus are the effect of a process that consumes the skin and neighbouring parts from without, inwards—from the surface towards the deeper structures. The red colour, the erythematous areola that surrounds the circumscribed indurations which succeed the pustules of rosacea, and these pustules themselves, which are generally met with in the neighbourhood of such indurations, are so many characters distinguishing this affection from the discoloured and indolent tubercles of lupus. In Greek elephantiasis the general tawny colour of the skin, the form and arrangement of the tubercles, which are nearly of the same tint, and present themselves as small knotty and unequal tumours, as well as the partial augmentations in size, succeeded by swellings that deform the face, are so many symptoms foreign to lupus *non exedens*. Further, the tubercles of this variety of lupus are commonly arranged in circular groups, the limits of which are strongly marked and covered with squamæ, which is not the case with Greek elephantiasis. With the slightest attention it seems impossible to confound the circular clusters of lupus *non exedens* though covered with squamæ, with the patches of lepra, the areas of which never show any thing like the cicatrice of a burn, nor the lenticular stains of a tawny yellow hue, produced by such tubercles as have shrunk, or such as are arising in their circumference (§ 674). The ulcers of Greek elephantiasis are always more superficial than those of lupus *exedens*, and show no tendency like them to attack the neighbouring healthy parts. Lastly, the tubercles of Greek elephantiasis are commonly disseminated over several points of the surface of the body, and are accompanied with many other symptoms that never occur in lupus.

The crusts of impetigo, yellow, prominent, rugous, and often very slightly connected, especially on the face, are very different from the thick, brown and firmly adhering scabs of lupus *exedens*, which, moreover, terminates in ulceration and cicatrization, consequences never seen in impetigo. It is also of importance to distinguish lupus *exedens* from some cancerous and syphilitic affections of the skin. Cancerous tubercles, very hard and often painful, are evolved among subjects more or less advanced in life, on the nose, cheeks and lips, especially, and generally exist for some considerable time before they ulcerate; lupus *exedens*, on the contrary, almost never appears in persons past the prime of life, and its tubercles are unaccompanied with pain from the first. Phagedænic cancer frequently commences in a solitary tubercle; in lupus *exedens* there are usually several, and in lupus *non exedens* there are almost uniformly a considerable number. Further, cancerous ulceration is often attended with considerable swelling of the soft parts, and the neighbouring vessels are dilated and varicose; these sores are also made worse by the application of escharotics; when the nose is the part affected, the bones also suffer and exhibit alterations characteristic of the disease. Lastly, cancerous sores discharge plentifully and are painful; they are not covered with thick dry scabs like lupus.

Syphilitic tubercles un-ulcerated, are more rounded, larger, and prominent in a greater degree, they are also of a more coppery red colour, without epidermic exfoliation, and have less tendency to ulcerate than those of lupus *exedens*, whose tubercles, flattened in their forms, and accompanied with a slight puffiness of the skin, are almost always covered with a small epidermic lamella; they are arranged in clusters, the circumference of which is strongly defined, while the centre is erythematous, furfuraceous, and traversed by lines or bands of a dull

white colour. To conclude, syphilitic tubercles, as consecutive symptoms of a venereal affection, are favourably modified by mercurial preparations, and commonly appear in individuals of a certain age, whilst lupus resists mercury in every form, and makes its attacks most generally among children and persons before the age of puberty. The ulcers that follow syphilitic tubercles are deep, and their edges are tumefied, of a coppery red tint and sharply cut; whilst those of lupus *exedens* differ in their causes and in their mode of destroying parts. In lupus *exedens* of the nose, the skin is commonly first ulcerated, the cartilages and bones being only attacked consecutively, and often after a very long interval has elapsed from the beginning of the disease; in syphilis, on the contrary, the bones are the structures that usually suffer first; and it is only after portions of them are affected with necrosis that the skin is perforated with ulcers. Lastly, tubercles and ulcers of syphilitic origin are almost always accompanied with symptoms that distinctly tell of their nature, such as nocturnal pains in the bones, exostoses, iritis, and often with tubercles or sores of the mouth, pharynx, velum palati, &c. The solitary tubercles of lupus *exedens* of the cheeks have frequently been mistaken, during their stationary period, for small sanguineous tumours or nævi; they differ from these, however, both in their structure and mode of formation, as well as in their tendency and termination. (Vide *Tumour vascular*, in Vocab.)

724. *Prognosis*.—Lupus is always a very obstinate disease. Months and even years commonly elapse before it yields to any form of treatment. Lupus *exedens* is not generally subdued until a considerable extent of parts has been destroyed, and always leaves indelible and deformed cicatrices behind it. The disease proves so much the less troublesome, and its effects less deplorable, as we are called upon to treat it at an earlier period of its existence, and as its progress has been slow. So long as the cicatrices remain soft, bluish, and convey to the finger something like a feeling of fluctuation, and so long as they are surrounded with tubercles of different sizes, there are grounds to apprehend a renewed attack of erosive inflammation, in which case the tubercles ulcerate, and the cicatrices already formed are not long of again becoming open. Puberty, and the establishment of the menstrual flux, which among women produce favourable changes in the greater number of chronic skin complaints, appear to have little influence in modifying or mitigating the destructive character of lupus.

725. *Treatment*.—The first indication in commencing the treatment of lupus is to endeavour to modify the general constitution by appropriate remedies. The disease itself is at the same time to be combated by such external and internal medicines as appear to exert a salutary influence on the development and progress of tubercles and the ulcerative process. When individuals of a flabby or evidently scrofulous habit are attacked with lupus, they may every morning take with advantage a tablespoonful of a solution of the hydrochlorate of lime, made by dissolving a drachm of the salt in a pound of water; every eight days the dose may be increased by a spoonful, and the medicine may at last be carried to the length of ten or even twelve spoonfuls in the course of the day with propriety. This is a preferable medicine to the hydrochlorate of baryta, the activity of which sometimes gives grounds for apprehension. Chalybeate mineral waters and the artificial preparations of iron may also be tried. I myself make frequent use of a powder composed of carbonate of iron, cinchona and cinnamon. Others have recommended the carburet and sulphuret of iron. Sulphureous baths taken every day, for one or two months, the patient continuing immersed for several hours each time, are also powerful means of modifying flabby and scrofulous constitutions. Bitter medicines, such as the infusion of gentian, &c., and above all, the preparations of iodine, are employed with the same views. Food of good quality, the moderate use of some generous wine, a residence in a dry and bracing air, are also powerful modifiers of constitutions of the above description.

Each variety of lupus presents particular indications:

1st. It is seldom that we are called in time to attempt the resolution of the primary tubercles of lupus *exedens*; patients generally present themselves with ulcers more or less extensive. When any tubercles exist, they appear disseminated in the neighbourhood of some ulcer, which it is then of the last consequence to check in its destructive progress. This is generally effected by means of caustic applications;—the animal oil of Dippel, the nitrate of silver, potassa fusa,



butter of antimony, super-nitrate of mercury, arsenical powders and pastes, and the actual cautery, have each had, and still have, their supporters. When the disease is very extensive, the cauterization ought to be at first confined to a single part, and extended successively to the whole of the affected surfaces. When the ulcers are covered with scabs, these must previously be got rid of by means of softening poultices. In *lupus exedens nasi*, when this part is affected with an indolent enlargement, and its surface is of a purplish hue, and covered with an epidermic exfoliation, it is often advisable to carry a hair pencil, dipped in the animal oil of Dippel, gently but repeatedly over the whole extent of the diseased skin. The nitrate of silver employed in solution, in a similar manner, has, however, generally appeared to me a preferable application. In the more serious cases, the nitrate of silver is very advantageously employed after the parts affected have been once or twice touched with the acid nitrate of mercury or the arsenical paste of Frère Côme; it is the most useful escharotic, indeed, whenever the object proposed is to cauterize superficially and with little pain. The acid nitrate of mercury may be applied not only to the ulcers of *lupus exedens*, but to the tubercles themselves, and to such of the cicatrices as remain bluish and soft, and threaten again to break open. When the end proposed is to produce an eschar of considerable depth, which is often necessary, the acid nitrate of mercury has indisputable advantages over the other active caustics that are often employed in the same intention, such as the potassa fusa and butter of antimony. A small dossil of lint is dipped in the solution, and applied to a portion of the diseased surface twelve or fifteen lines in diameter; a little soft dry lint is then to be laid over the space cauterized; this trifling operation is not performed without the infliction of severe pain. The surfaces destroyed in this way are at first of a greenish-white colour; a yellowish and slightly adhering slough or scab is gradually formed afterwards, and the eschar is finally thrown off at the end of a week or a fortnight. Arsenical pastes can only be employed with safety as escharotics, by enforcing precautionary measures of the greatest strictness against their entrance into the nasal fossæ. The use of the acid nitrate of mercury as an escharotic, has the same disadvantage as the arsenical paste, in occasionally causing a considerable degree of erysipelatos inflammation; this consequence, however, is in general much less severe, and far more transient with the mercurial than with the arsenical preparation.

In *lupus* of considerable extent affecting children, women, and subjects of irritable constitution, the ulcerated surfaces, freed from incrustations, may be dusted over with a thin layer of a powder composed of ninety-nine parts of calomel, and one of arsenious acid. This application is much employed by M. Dupuytren, according to whom it acts rather as a specific than as an escharotic. Should the affected parts be covered with an imperfect cicatrice, it is even advisable to destroy this, and to apply the powder four-and-twenty hours afterwards. Should there be any difficulty in getting the powder to adhere in sufficient quantity, it may be mixed with a little gum-water or simple ointment and applied; in this case, however, the dose of arsenious acid employed must be increased by one or two hundred parts. In every case we are to wait till the powder or unguent falls off of itself, which usually happens after the lapse of eight or ten days, and then renew the application until a complete cure takes place, which is occasionally accomplished within eight or ten weeks, that is to say after five or six applications of the remedy. When the ulcerated surface is of considerable extent, it is advisable to apply this compound powder to a space of about two inches square at a time, and only to cover the whole extent of parts affected by degrees. Lastly, when the ulcers of *lupus* are of very old standing, and extremely indolent, great benefit is occasionally derived from covering them with a blister, before beginning the application of the powder or salve above mentioned. The advantages possessed by this powder over the arsenical paste in common use, (*pâte arsenicale de frère Côme*), are those of not exciting erysipelas in the tissues around the diseased structures to which it is applied and in cauterizing much less deeply, so that it may be used again and again without danger to the patient. The relative proportions of its component ingredients may be changed by the cautious practitioner, according to the extent and circumstances of the case he has in hand; but it seems important

that neither be omitted, inasmuch as both appear necessary to its action, without our being able to determine precisely the part which each of them plays in the general effect.

726. The arsenical powder of frère Côme<sup>1</sup> is a more energetic external remedy, which seems more particularly available in cases of old and obstinate ulcerated *lupus*, the ravages of which have been found uncontrollable by other less active applications. It is well to have recourse to this preparation at the very outset in *lupus exedens* of the cheeks. To prepare it for use a small quantity must be made sufficiently thin upon a piece of broken earthenware plate, and by means of a spatula spread upon a surface that ought not to exceed eight or ten lines in diameter. This application is almost always followed by some degree of erysipelas, which, when slight, may be left to itself; but when it proves severe, when the face becomes very much swollen, and the patient complains of violent headache, whilst the pulse is full and frequent, blood-letting must be practised, leeches attached behind the ears, emollient or laxative lavements thrown up, stimulating pediluvia employed, &c.; the inflammation soon abates, and the only consequence of the application of the arsenical caustic that remains is a blackish and thick eschar which continues very long adherent. These are all much more effectual modes of producing eschars and arresting the current of diseased action in *lupus* than the use of the actual cautery, a remedy which in this complaint is nearly abandoned at the present day. In *lupus exedens* of the nose, indeed, it frequently aggravates the disease, causing the cartilages to swell and be absorbed; it would appear to be rather more applicable in *lupus* of the cheeks. Whatever the form of cautery or caustic employed, when the eschars are detached, they seldom fail to expose an ulcerated surface of the best appearance beneath them; a single application of the caustic, however, is generally insufficient to accomplish a cure; ten, fifteen, twenty, thirty or more, may be necessary in the course of several years, when the diseased surfaces are very extensive and of ancient date; a cure, indeed, is seldom or never consummated but by perseverance and undeviating attention. Whilst this is going on, when the nose is the seat of the disease, it is necessary to guard against the contraction of the nostrils, which then frequently show a great tendency to close up. They must be enlarged, when they have shrunk in any considerable degree, with the knife or caustic, and kept from again shrinking during many months by means of tents of prepared sponge.

727. During the treatment, patients should avoid exposure to excessive heat or to rigorous cold. By want of attention to this simple precaution, cicatrices that appeared sound have frequently been seen to open out afresh. When the disease is accompanied with any evident functional disturbance, this must be remedied by appropriate means. When amenorrhœa complicates it, the return of the catamenia must be solicited, and the appearance of this discharge kept up by every means at our disposal; when it cannot be brought back, a few leeches should be vicariously applied to the external parts, when symptoms of general uneasiness, or pains in the head, &c., seem to indicate the periods of its natural flow.

728. *Lupus non exedens* is a more obstinate disease, if possible, than the one we have just been engaged in describing; in the hope of effecting the resolution of the tubercles which characterize it, the most powerful medicines of every description have been pushed to the uttermost. The tisan of Feltz,<sup>2</sup> Pearson's solution of arseniate of soda, in doses, increased from a scruple to a drachm daily; Fowler's solution of the arseniate of potash even in hazardous doses; arsenic, in a word, in every form, has appeared to exert but a very slight influence on the evolution and progress of the tubercles of this variety of *lupus*. The animal oil of Dippel has been tried, but with results too diversified to enable us to have any reliance on its powers.

The deuto-iodide of mercury, in doses gradually increased from one-fourteenth or one-tenth to one-fifth of a grain daily, is the only one of all the internal medicines that I have tried, which has appeared to me to exert an indubitable influence upon the progress of the tubercles of *lupus non exedens*. After continuing this medicine for a month or two, the parts covered with tubercles frequently become painful, and after a kind of local or intestine inflammation, attended

<sup>1</sup> White oxide of arsenic, cinnabar, and animal charcoal.—Tr.

<sup>2</sup> A decoction of crude antimony, sarsaparilla, and fish glue.—Tr.



with vague and irregular symptoms of general febrile disturbance, the tubercles begin to shrink, and many of them disappear entirely. After continuing the use of the deuto-iodide of mercury for two or three months, patients should leave it off for some short time, and thus try its influence repeatedly. Besides the undoubted action exerted by this preparation on such tubercles as already exist, its influence on the general constitution in preventing completely the formation of fresh tubercles, is not less remarkable. Nevertheless, despite my utmost care in the exhibition of the medicine, and all the watching I could give its action, I have occasionally had to contend with symptoms of inflammation in the large intestines which compelled me immediately to suspend its use, if, indeed, I was not obliged to abandon it altogether. (a)

External applications have been administered with some success in this form of lupus. In the foremost rank of remedies of this class must be placed the inunction, over the districts occupied by tubercles, of the ioduret of sulphur ointment (℞. Iodid. sulphur. gr. xviii; Adipis sul. ʒi), of an ointment of the proto-ioduret of mercury (℞. Proto-iodid. hydrarg. gr. xxx; Adipis ʒi), and of the deuto-iodid. of mercury (℞. Deuto-iodid. hydrarg. gr. xviii; Adipis ʒi). Under the influence of one or other of these unguents, rubbed on the affected parts, the skin becomes hot and red, and the tubercles frequently shrink and disappear entirely. Yet cases do occur in which these applications produce little or no amendment, if they do not perchance excite unpleasant erysipelas of the face.

729. The occurrence of this inflammation as a consequence of the internal use, or external application of these preparations, however, frequently appears to have a beneficial ulterior effect, not only on the part in which it is developed, if this chance to be beset with tubercles, but, further, on the clusters at some distance from the seat of this new affection. This circumstance was presented to my notice in a very recent instance in the Hôpital de la Charité: A young woman labouring under lupus non exedens of the cheeks, forehead, and left arm, was attacked with erysipelas of the face, and during the continuance of this kind of exanthematous fever, the skin of the arm underwent as evident an improvement as that of the cheeks.

730. In the hope of preventing the extension of the tubercular clusters of lupus, I have isolated them by an incision, as well as by a deep application of caustic; but in vain; fresh tubercles appeared beyond the artificial boundary I had traced. The destruction of the clusters by caustic, or their extirpation with the knife, would be attended with no good effects in the greater number of cases: to cure this variety of lupus completely it were necessary to eradicate the unknown cause under the influence of which its tubercles are evolved; and it is probable that the only means by which this can be in any way accomplished consists in the exhibition of those medicines which pervade the whole system, and alter it deeply.

#### Historical Notices and particular Cases.

731. Hippocrates mentions *eating* or *gnawing* herpes, 'ΕΡΙΠΕΤΕΣ ἑσθιόμενοι' and eating ulcers θηγία.<sup>2</sup> Celsus has amalgamated the account of these two forms of disease, in his description of *therioma*,<sup>3</sup> in which the striking and essential features of lupus may be recognised. From this time the denominations, herpes *esthiomenes*,<sup>4</sup> herpes *exedens*,<sup>5</sup> herpes *ulcerosus*,<sup>6</sup> and darte *rongeante*,<sup>7</sup> eating tetter, and

(a) The benefits promised in the text from the use of the iodide of mercury, may, with still stronger probability, be procured by the iodide of mercury and arsenic, (Donovan's solution)—Dr. Dunglison (*New Remedies*, 4th ed.), among others, speaks favourably of this preparation, employed both internally and externally.

<sup>1</sup> Hippocrates. Prædictorum, lib. ii, ed. Foes. in-fol. Francfurti, 1621, p. 98.

<sup>2</sup> Œconom. Hippocr. art. θηγία.

<sup>3</sup> Celsus. Lib. v. de Therioma: Id ipsum ulcus neque tactum, neque medicamentum sentit: prurigne tantum movetur . . . atque it quoque malum serpit, fitque ex his ulcus quod ἑσθιόμενον. Græci vocant, quia celeriter serpendo, penetrandoque ulcus ossa, corpus vorat.

<sup>4</sup> Forestus. Observ. chirurg., lib. ii. obs. v. p. 42.

<sup>5</sup> F. Joel. Oper. chirurg. de ulceribus, p. 221.

<sup>6</sup> Amatus Lusitanus. Curat. med., cent. ii. curat. xxxvii. p. 185.

<sup>7</sup> Alibert. Précis théorique et pratique sur les maladies de la peau.

*phagedænic* ulcer have been in very general use among medical authorities. The translators of the Arabian writers introduced the titles *formica corrosiva*,<sup>8</sup> and *formica ambulativa*; by which they rendered the Arabic word, that appears to correspond to the esthiomenous or eating herpes of the Greeks. The term *lupus*, introduced into our modern nomenclature, by Willan and Bateman, had already been applied by several writers of the middle ages to designate an *eating ulcer*,<sup>9</sup> in the same sense, therefore, as the term herpes *exedens* was employed of old. The disease which we have described under the name of Lupus, has further been confusedly spoken of under that of *papula fera*,<sup>10</sup> although the disease mentioned by Celsus under this title is evidently lichen *agrius*. Lupus has also been described under the head of *noli me tangere*,<sup>11</sup> a designation which has likewise been applied to cancer; and Delpech,<sup>12</sup> under the name of lupus of the fingers, has given the details of an ulcerous disease attended with extreme pain, to relieve which he was even compelled to divide the ulnar nerve. Alibert first described lupus under the title of *darte rongeante*, but has more recently designated the disease under the denomination of *esthiomene*. Messrs. Cazenave and Schedel, who have taken great pains to expose the characters of this disease, have, like myself, adopted Willan's name, *lupus*, which has the advantage at least of not designating as *phagedænic* or *eating* the whole of the varieties of this disease, one of which does not even cause ulceration of the skin. M. Bachelet de Lindry<sup>13</sup> was certainly to blame when he united, under the title of *darte rongeante*, the details of cancerous sores, and of ulcerated syphilitic tubercles of the skin. M. Arnal has mentioned a lupus *exedens* of the septum nasi, and arch of the palate.<sup>14</sup> The remarks of M. Bielt,<sup>15</sup> and of M. Paillard,<sup>16</sup> on the use of the ointment of the deuto-ioduret of mercury, may be consulted with advantage. The observations of M. Lugol<sup>17</sup> on the employment of iodine in cutaneous *phagedænic* scrofula; and those of M. Lemasson<sup>18</sup> on the exhibition of opium and iodine in combination, will also be read with profit. To conclude on the subject of escharotics, the dissertations of M. Guillerminéau on the nitrate of silver, 4to., Paris, 1824, of Mr. Godart on the acid nitrate of mercury, 4to., Paris, 1826, and the essay of M. Patric on the art of applying the arsenical paste, 8vo., Paris, 1817; as well as an account of several cases of lupus treated by caustic applications, in the Journal Hebdomadaire,<sup>19</sup> will be found to give a large amount of information. The case related by M. Brillouet,<sup>20</sup> under the title of *darte rongeante*, is evidently one of impetiginous eczema.

CASE CXXV.—*Lupus non exedens* serpiginosus; *deuto-ioduret of mercury*; *erysipelas*; *bitters*; *improvement*. Hélène H \* \* \*, aged nineteen, of fair complexion, was received into the Hôpital de la Charité, in December, 1832, labouring under lupus, which had appeared, when she was but three years old, upon the upper part of the left arm, and extended from thence, in spite of various applications, as far as the wrist. To this extent of surface the disease continued limited during twelve years. At the age of fifteen, however, when the catamenia first made their appearance, the disease, besides increasing in severity on the arm, began to attack other regions,—the cheeks, chin, upper part of the right buttock, and neighbourhood of the left knee. All the remedial measures again enforced, proved as unavailing as ever against the progress of the disease.

On the entrance of the patient into the hospital, the whole of the left arm, from about three finger-breadths below the thick of the shoulder to the wrist, was one mass of disease; it was bounded above and below by a distinct rank of tubercles, several lines in breadth,

<sup>8</sup> Avicenna, fen. iii. lib. iv. Tract. i. cap. vi.—Fen. iv. Tract. iii. cap. i.—Zacutus Lusitanus. Prax. hist., lib. i. obs. 66.

<sup>9</sup> Th. Bonet. Oper. chirurg., t. ii. lib. vi. De affectibus externis, sec. iv. p. 305.

<sup>10</sup> Haffner (Sam.). De cutis affectibus, lib. i. cap. xv. p. 161.

<sup>11</sup> Cooper (Samuel). Dictionary of Practical Surgery, 8vo. London, 1829. Art. Noli me tangere.

<sup>12</sup> Gazette des hôpitaux, 1832, p. 458.

<sup>13</sup> Diss. sur la darte rongeante, in-8. Paris, 1803.

<sup>14</sup> Journal Hebdomadaire, deuxième série, t. vi. p. 29.; *ibid.*, p. 137; t. viii. p. 437.

<sup>15</sup> Rec. périod. de la soc. de méd. de Paris, t. lvii. p. 187.

<sup>16</sup> Journ. Hebdomadaire, deuxième série, t. viii. p. 99.

<sup>17</sup> Journ. Hebdomadaire, t. iv. p. 76.

<sup>18</sup> Nouvelle Bibliothèque méd., 1826.

<sup>19</sup> Troisième Essai sur l'emploi de l'iode dans les maladies scrofuleuses, in-8. Paris, 1831, p. 61.

<sup>20</sup> Journ. Hebdomadaire, t. iv. deuxième série, p. 117.



and presenting a sharp and well-defined edge towards the healthy skin, and was higher here than on the inside, towards the diseased surface, where it was flattened, and covered with whitish or yellowish squamæ. Seen from a certain distance the disease had very much the appearance of a large cicatrice produced by a burn; but more narrowly inspected, the whole surface was found beset with hard, flattened, and, in general, but slightly prominent tubercles, of a dusky red colour, and varying in size from that of a large pin's head to that of a pea. The greater number of these tubercles, which were more prominent than the generality, were without squamæ; the remainder were scaly on their surface, and disseminated over the limb, more especially in the line of extension. The squamæ were thin, easily detached, and broader in the circumference than in the centre of the tubercles, around which they formed an irregular indented circle. Besides these squamæ, quantities of flimsy lamellæ, bran-like in appearance, were seen at the bottoms of the furrows which intersected the whole of the diseased surface. The skin in the spaces between the tubercles was of a pale rose, or slightly violet hue. An irregular whitish cicatrice extended between the arm and forearm, impeding the ready extension of the elbow-joint. The bursa that lies over the olecranon was distended with fluid.

Both cheeks were almost completely covered with a pretty regularly circular patch of lupus, the circumference being formed by a well-defined raised ring of flattened, yellowish tubercles, and its middle, of a rose colour generally, but mottled with white, naked in some places, in others covered with flimsy epidermic scales. Under the chin and on the forehead there were two small clusters of not more than three or four tubercles each, covered with thin squamæ.

The patient was at first put upon a course of bitters, combined with the exhibition of one-twenty-fourth of a grain of the deuto-iodide of mercury daily, whilst the clusters on the cheeks were regularly rubbed with an ointment of the ioduret of sulphur. The dose of the deuto-ioduret was gradually increased till the tenth of a grain was taken at a time. The iodide of sulphur was continued in frictions externally; the patient took a few simple and then several sulphureous baths (March, 1833). Towards the end of April the squamæ which covered several of the tubercles of the arm were detached, and not reproduced. The tubercles looked shrunk, but those that bounded the disease inferiorly and that were the largest, did not appear to have undergone any modification. About this time, however, a kind of excitement seemed to take possession of the forearm, which became swollen, painful and generally shining on the surface. The tubercles which on the entrance of the patient were of a dull red or pale rose colour, enlarged, got more sensitive, and anon were affected with a serous exudation to such an amount that the patient was obliged to change the linen dressing that was now applied several times a day. A minute orifice could be perceived by close inspection on the summit of several of them, and when those that were swollen and of an oval shape were pricked with a needle, a globule of transparent, yellowish serum could be expressed from them. At a later period these tubercles declined in size, became less sensitive, shrunk to the level of the surrounding skin, faded generally in depth of colour, and ended by disappearing completely. The skin of this part, however, did not recover its natural pliancy. The patches of the face underwent no remarkable change. During the month of May the internal medicine was continued; the external application was suspended, and gelatinous were substituted for sulphureous baths. The state of the disease was everywhere stationary. During the course of June, the deuto-iodide of mercury was carried to the length of one-eighth of a grain daily, and for five or six days consecutively the sulphur ointment was rubbed upon the affected parts. On the 15th general uneasiness was complained of, and the patient was attacked with vomiting of bilious stuff. There was no fever. These symptoms I ascribed to the deuto-iodide, and ordered it to be suspended for five days; the common effervescing draught checked the sickness. The medicine was not resumed before the 12th of July, when it was again prescribed in the dose of one-twelfth of a grain. Vomiting supervened for the second time, and was now accompanied with fever. Leeches were applied to the epigastrium, and the patient was confined to low diet. The unpleasant symptoms soon ceased.

August.—The deuto-iodide was resumed and continued to the

15th, when it was suspended, and decoction of bark and gentian, with carbonate of iron, prescribed in its stead. The same medicines were continued during the whole month of September. The disease seemed nearly stationary. October 5th.—Uneasiness, retching. 6th.—An erysipelatous point appeared on the face (*mercurial inunction*). 7th.—It extended to the forehead (*V. S. B. ad 3xii*); fever in the evening rather severe; some delirium during the night; the diseased arm became hot, and slightly swelled; the erysipelas spread to the scalp. 9th.—Incessant delirium; decubitus on the back; pupils dilated; no answer to questions; diminished sensibility of skin; prostration; difficult deglutition; breathing deep; skin hot; pulse 110 per minute. (*Venesection in the morning; forty leeches in the evening to the mastoid processes; ol. ricini.*) 12th.—Continuance of the cerebral symptoms; coma; the erysipelas fading. (*Ol. Croton, gttss. 2. Whey with cream of tartar; blisters to the clusters of the cheeks.*)

13th.—The comatose state continues; pulse weak and frequent. (*Ice constantly to the head.*) 14th.—The ice continued; a purgative glyster brought away a copious and foetid evacuation from the bowels; the comatose state ceased; the face was desquamating rapidly. The remarkable point in the history of this erysipelatous fever is this: that many of the tubercles of the forearm and arm shrunk away. The bold lines, too, that bounded the disease above and below, disappeared almost completely. This favourable change, however, was purchased with a severe illness, and a subsequent attack of melancholic delirium, in which the patient fancied her life, and that of her relations, were threatened, &c., and which was not dissipated for many months after her return to her family. She left the hospital on the 1st of November, 1833.

CASE CXXXVI.—Lupus exedens of the left ala nasi. P. F. C., aged thirty-one, entered the Hôpital de la Charité the 3d of April, 1833. Except an habitual cough depending on a chronic bronchial affection, this man had always enjoyed good health until he became locally affected with lupus around the nostrils, about eighteen months ago. At this time, without known or suspected cause, a spot (*bouton*) of considerable magnitude, and of a deep red colour, probably a tubercle, appeared on the furrow corresponding with the upper edge of the cartilage which forms the left ala of the nose, with no other symptoms than a slight feeling of tension and itchiness, that led the patient to scratch the part; this caused it to ulcerate; it became covered with a yellowish scab, by picking which, the progress of the disease seemed to be accelerated. Other tubercles made their appearance in the neighbourhood of the spot first formed; but these did not ulcerate. The skin upon which they were evolved was of a deep-red colour, and covered with squamæ. C \* \* \* had entered himself a patient of the Hôpital St. Louis in March, 1832, six months after the appearance of the disease. There the sore was cauterized; vapour-baths were administered; the parts affected were anointed with an ointment of the deuto-ioduret of mercury; an infusion of hops and chalybeate medicines were prescribed. Various other medicines were subsequently tried, among them the syrup of Cuisinier.<sup>1</sup> Having got considerably better he left the hospital.

When C \* \* \* entered La Charité, the anterior and outer part of the left ala nasi, near its junction with the cartilage of the septum, was destroyed; the part in this situation presenting a semicircular notch, irregular in its outline, of a sallow-red colour, and partially covered with laminated yellowish-gray scabs, which adhered pretty firmly, and clung more especially to the inner surface of the remaining portion of the ala nasi. Externally the skin was of a deep-red, and covered also with small, half-raised squamæ. The right ala nasi was in the same condition, especially in three different places, corresponding to so many small tubercular elevations. The patient only complained of a little smarting in the affected parts from time to time. There was no unpleasant odour, and no discharge. The patient was at this time labouring under one of his habitual attacks of bronchitis, which was acute in its character, but was successfully treated by rest, mild diluents and purgatives.

After washing the nose with decoction of althea, the diseased structures were touched with the nitrate of silver in substance, on the 20th of May. On the 23d, after bathing anew with decoction of althea,

<sup>1</sup> A comp. syrup of sarsaparilla, senna, &c.—7r.



and applying an emollient cataplasm to remove the incrustations which had been but imperfectly got rid of before, the parts affected were touched in the morning with the acid nitrate of mercury. This caused severe pain, which lasted till mid-day. The eschar was not detached till the 27th, after a vapour-bath. The sore appeared covered with small nipple-like projections, and was of a bright-red colour. Fresh laminated scabs soon covered the ulcerated surface; they were thinner than at first, and the vapour-bath, which the patient took every day, caused them speedily to fall. June 5th.—Sulphureous baths and an infusion of hops were prescribed; the latter was replaced by the decoction of sarsaparilla. On the 10th the deuto-ioduret of mercury was ordered in the dose of one-tenth of a grain. Under the influence of these various measures the squamæ and scabs were reproduced with less rapidity, and the small tubercles of the right ala nasi faded.

20th.—The diseased surfaces were again touched with the acid nitrate of mercury, but without any improvement following: the disease was stationary. The deuto-ioduret on the 25th was carried the length of one-eighth of a grain, and continued at this dose to the 14th of July, when the patient requested his discharge, and left the house imperfectly relieved.

CASE CXXVII.—*Lupus exedens of the nose.* M. C. Boulard, a sempstress, aged twenty-three, became my patient in the Hôpital de la Charité, the 17th of September, 1833. This girl is in the habitual enjoyment of good health; she lives in an airy situation, and has abundance of wholesome food. It is now about three years since a scab formed in the inside of the right nostril, without remarkable local phenomena, and when she felt herself in perfect general health. This scab always returned when the patient picked it off with her nail. The part then became *chapped*, pouring out a kind of sanies which concreted into scabs; the chap extended slowly but evidently, and a lenticular tubercle made its appearance on the anterior part of the lobe of the nose. The patient now took various tisans without advantage. The application of a plaster, finally, which was kept open for several weeks, caused much pain, and swelling of the nose and face; a fortnight afterwards the end of the nose sloughed off.

When Boulard entered the Hôpital de la Charité, the one-half of the right ala nasi was completely destroyed, so that the septum could be readily seen; and a second sore, developed in the median line on the point of the nose, had rendered it bifid. The soft parts that ought to have formed the point of the nose were gone, and the lower part of the cartilage of the septum was eroded. In the angles of the sore small scabs of a yellowish-brown colour, were observed resting on moist surfaces of a pale rose tint, and mammillated on their surface. The skin of the nose to the distance of five or six lines from the ulcer was of a deep red, swelled, and covered with squamæ, for the most part of a light gray colour, thin and dry. The transition from the diseased to the sound integument was rapid, and marked by a distinct line, above which, however, a few epidermic furfuræ were still conspicuous. The principal functions were regular; the appetite good; only the catamenia, which had appeared four days too soon, were less copious than wont.

The patient was at first directed to take an infusion of hops, a tonic powder, (℞. Ferri subcarb. ʒ; pulv. cinchon. gr. xxx; pulv. cort. cinnamon. gr. xii.) and to use the sulphureous bath every day. Emollient poultices were further applied to the nose to facilitate the removal of the scabs and squamæ.

Sept. 20th.—Application of the acidulous proto-nitrate of mercury, especially to the angles of the sore. The pain excited by this was severe, and some degree of swelling followed. In three days the eschar had fallen, and the parts were again cauterized; the pain on this occasion was less than at first; no great improvement was perceptible. Yet the redness of the nose had declined, and the squamæ were formed less rapidly than heretofore. The medicines were continued. The catamenia which should have appeared between the 20th and 21st of October failed, and the patient complained of lassitude, general uneasiness and headache.

November 2d.—An erysipelatous blush showed itself upon the nose, and by next day had spread to the cheeks; the inflammation did not

appear very active; headache, tongue foul, thirst (*dilutents; mustard foot-bath, venesection, low diet*). 4th.—The erysipelas has extended to the whole of the face; general symptoms as before; the blood abstracted is not buffy. The scabs in the right nostril are so thick that they obstruct the passage considerably. 6th.—The erysipelas ceased to spread, the febrile symptoms became moderate. 7th and following days, the erysipelas was resolved, and desquamation took place from the whole of the parts which had been inflamed. The lupus was now found to have undergone a remarkable change. The redness about the ulcer had disappeared; the skin of the nose was smooth and white, the eroded parts were dry and covered with scabs of extreme tenuity. (*Sulphureous bath.*)

Towards the end of November the catamenia again failed to make their appearance, and the lupus which had hitherto worn a favourable aspect began to ulcerate afresh. (*Renewed application of the caustic solution; lotions with a wash of sulphuret of potash.*) The lupus again looked better; but the patient became indisposed with febrile symptoms, which lasted to the 15th of November, when the application of fifteen leeches to the external organs put a period to the accidents, during the continuance of which a perforation had been made through the septum narium. The sulphureous baths were again tried, and repeated applications made of the nitrate of silver. The patient quitted the hospital some time afterwards, not sensibly better than when she entered.

CASE CXXVIII.—*Lupus exedens of the chin, cheeks and lips, in a person of scrofulous habit.* A young shepherd, eighteen years of age, was received into the Hôpital St. Antoine, in 1828, labouring under a tubercular affection of the chin. In his youth he had suffered from crusta lactea (*eczema impetiginodes*) of the scalp. At the age of nine the lymphatic glands of the neck enlarged considerably, and several of them formed abscesses and burst, leaving indelible cicatrices under the angles of the jaw.

The tubercles of the chin were of a violet-red colour, considerable size, slightly conical shape and ulcerated on the summit. The ulcerative process soon spread over the whole of the chin, without penetrating deeply among the subjacent tissues. The sore was concealed beneath enormous scabs, nearly an inch in thickness, rising above the level of the skin, and surrounded with a red, and, as it were, erysipelatous blush. The lips, cheeks and nose became rapidly the seat of new tubercles and ulcers; the upper lip was particularly red and swollen. The eyes were inflamed and slightly sensible to the light; there was a large pterygium on the right eye; the conjunctiva of the left was red and inflamed; the lower eyelids of both sides were somewhat everted; the nostrils poured out a plentiful discharge of thick mucus, which dried up under the form of crusts. On the right cheek there were three tubercles in a state of suppuration on their summits; the left cheek and malar region were possessed by a broad but not very deep ulcer.

This patient continued under treatment for nearly a year; bitter medicines internally, and sulphureous baths externally, were employed; the powder of calomel and arsenious acid were applied repeatedly; but despite of all that could be done, new tubercles continued to be developed and to fall into a state of ulceration.

CASE CXXIX.—*Lupus of the nose in a scrofulous subject.* Diogue, aged thirty-six, had menstruated at eighteen, and continued to do so irregularly ever since. At the age of fourteen a *spot* (*bouton*), probably a tubercle, made its appearance on the lobe of the nose, and continued in the same state for about a year, when it ulcerated and was followed by several others. This woman then went into an hospital where she took various medicines—infusion of hops, baths, and the elixir of Peyrilhe, and the ulcer cicatrized, but only after the destruction of the right ala of the nose, and with the contraction of the opening into the nostril of the same side. Two years afterwards the disease recurred, and Diogue became a patient in the same hospital. Under similar treatment, continued for two months, she recovered a second time; but, probably, in consequence of her indolence or her negligence, the right nostril was wholly obliterated, and all that remained of the left one was a hole, scarcely perceptible, and only capable of admitting a thread.



## SCROFULA.

Vocab. *Scrofula, Struma.*

732. The title scrofula, as is well known, is given to a general and constitutional affection, usually proclaimed by glandular or articular enlargements, which are frequently followed by ulcers and fistulous sores. Occasionally, however, this disease appears on the surface of the body, when it is characterized by lesions peculiar to itself; tubercles of a livid red, which remain very long indolent and stationary, make their appearance on different regions of the skin; these end at length by becoming softened and perforated, when they discharge a serous or puriform fluid, which, exposed to the air, dries up under the form of crusts or scabs.

733. The tubercular formations characteristic of cutaneous scrofula are the lesions which it is my object to treat of in this work; not only because the skin is the element in which they appear, and because they have peculiar and distinguishing characters; but, further, because it is often of the highest importance, in a therapeutical point of view, especially, to distinguish these from other tubercular diseases. It is therefore mainly with a view to prevent errors in diagnosis that I have determined to describe cutaneous and subcutaneous scrofula, and scrofulous ulcers in these situations.

734. It would seem that cutaneous scrofulous tubercles may be developed on every region of the body; but they are most frequently seen on the face, neck and upper extremities. They often appear in the vicinity of the scrofulous ulcers consecutive to glandular or indolent subcutaneous abscesses. I have also observed them succeed the bites of leeches in persons of scrofulous habit. They are seldom numerous, and more frequently isolated than in clusters. The *isolated* tubercles commence as small spots or stains of a livid red colour, and unaccompanied with heat, pain or itching. The finger applied to these spots detects something hard, like a grain of barley or small kernel imbedded in the substance of the skin. One or two months after its first appearance, the small spot, which has become gradually more and more prominent, acquires the tubercular character very decidedly. These tubercles are usually no larger than a pea, in some cases they equal a small olive in size. If they increase in size, at a subsequent period, it is only when they begin to soften. This softening, which is one of their principal characters, is accomplished with extreme slowness. It is already perceptible to the touch, before the surface and the circumference of the tubercles show any symptoms of excitement, and very long before they become open. The softening usually begins in several points, when the tubercles are of any size; and each of these softened points occasionally bursts outwardly and very generally at different times. The form of the tubercles is then irregular, they are uneven on the surface, full of depressions and elevations, and often present a small and recent perforation covered with a scab. Under other circumstances, whether in consequence of the softening, after having begun in the centres of the tubercles, extending from thence to their entire masses, whether, after having begun in several places, from ending in the formation of no more than a single abscess, the whole of their superficies becomes soft and fluctuating to the touch. Arrived at this stage, scrofulous tubercles may still remain stationary for a very long time: the skin, red and livid, is neither materially softened, nor perforated, and if the tubercle be now punctured, a few drops of a serous rather than of a purulent fluid escape. The opening continues for a very long while fistulous, and when it does cicatrize, be it naturally or after repeated applications of caustic, a small hard and irregular nucleus or kernel always, or almost always remains in the part affected. Matters are much the same when the tubercle is left to itself, and it bursts after an interval of one or more years; the violet colour of the skin grows less intense, but the induration does not give way in the same proportion. It very rarely happens that true ulcers succeed these little tumours.

735. Cutaneous scrofulous tubercles may occur in clusters of larger or smaller extent. Under this form they occasionally appear on the outer aspect of the arm, forearm, back of the hand and fingers, coinciding for the most part with other evident strumous affections of the bones and conglobate glands. The form and dimensions of these

clusters are rather variable: generally they are not less than an inch, nor more than from two to three inches in diameter. The tubercles thus agglomerated stand out in relief from the skin; they form mammillated or knubbly clusters, the violet-coloured surface of which, is pretty firm in some points where the tubercles are not dissolved, soft and fluctuating in others where this has taken place, moist in those parts where the contents of the tubercles have made their way to the surface, and covered with lamellar scabs in those where the discharge has become hard and dry. When the constitution has suffered profoundly under the influence of scanty and unwholesome fare, and of the privations of every kind that attend upon extreme poverty, the tubercular patches sometimes put on a very peculiar appearance; their surface to a very considerable extent, becomes soft, fungous, of a grayish white or ruddy violet colour, without any morbid increase of temperature and almost without pain, at the same time that it is habitually defiled by a yellowish, and sometimes sanguinolent, serous exudation. This variety of cutaneous scrofula is still slower in its progress and more rebellious to all remedial treatment than the preceding.

736. Subcutaneous scrofulous tubercles are small circumscribed tumours, situated in the cellular substance, under common integument, and developed not only in the vicinity of glandular enlargements but in districts that are free from all other disease, and particularly on the upper extremities. These tubercles are flatter and less movable than enlarged lymphatic glands, and are distinguished at the outset by a small circumscribed lenticular hardness, situated under the skin, which is movable over them, and unaltered in its colour. They usually continue for a long time stationary in this their first stage; insensibly, however, and by very slow degrees, they increase in size, and at length attain the volume of a walnut or small egg.

It is only at a considerably advanced period of their growth that the skin, which had hitherto preserved its natural mobility, becomes adherent to the centre of these subcutaneous scrofulous tubercles; it is also in this point that at a still later period the skin acquires the peculiar livid red colour characteristic, among other things, of the affection which subsequently spreads to the base of the tumours.

The tumours, firm at first under the finger, become soft at length, and if opened at this stage, a small quantity of greenish-coloured, serous fluid, thickened with whitish flocculi or curdy-looking matter, is evacuated. If left to themselves the skin over their centre commonly gets thinner and thinner, and an opening, which is always of greater size than in *cutaneous* scrofulous tubercles, is finally established. The skin is then almost always loosened to the base of the tumour, and is at last destroyed to such an extent that it is no longer a fistulous opening which is presented to us, but an open ulcerated surface. When these tubercles burst spontaneously, their fistulous openings yield nothing but a little serum, and a few curdy fragments, a quantity of which always continue in the tumour and may be expelled by a sufficient degree of pressure exerted on its base. When these tubercles arise near the edges of scrofulous sores, they are evolved and soften less tardily than under other circumstances. Their contents are also occasionally evacuated under the loosened edges of these ulcers.

737. Scrofulous ulcers are consecutive to cutaneous and subcutaneous tubercles; to excoriated chilblains, and indolent abscesses; to caries and white swelling, &c., occurring in strumous constitutions. They are more particularly frequent on the neck, and next on the extremities. They are in general of small extent; yet they are occasionally observed to multiply astonishingly in some particular region of the body, and to destroy, for instance, the skin of the neck, and a considerable portion of that of the chest and shoulders.

The isolated cutaneous tubercle seldom proves the primary cause of true ulceration; it frequently shrinks, and cicatrizes, after becoming softened. This kind of tubercle of a large size, however, does occasionally end in an ulcer, the dark red or livid, hard and indolent edges of which penetrate deeply into the skin.

The edges of the ulcers consequent on *cutaneous* scrofulous tubercles collected into clusters, are of a brightish red, considerably swollen, not very painful, and apt to bleed on the slightest touch. Those of the ulcers that follow *subcutaneous* scrofulous affections,—tubercles, enlarged glands, indolent abscesses, caries, &c., present several pecu-



liarities: they frequently form loose flaps, detached from the subjacent tissues, doughy, and very commonly of a livid red colour, which indicates very accurately on the exterior, the distance to which the loosening extends internally. The *bottoms* of scrofulous ulcers of the skin, consequent on agglomerated and confluent tubercles, are often pale and without granulations, but puffed and flabby. The discharge from these ulcers is sanious rather than purulent, and, in drying, forms greenish and brownish incrustations, which are by and by detached from the surfaces to which they adhered by a fresh secretion of the sanious fluid. The bottoms of these sores in other cases remain constantly bedewed with this peculiar secretion, and are very uneven, and of a yellowish-gray in different places. The lymphatic glands in the vicinity of such ulcers are frequently enlarged; in the neck especially, they seem now and then to form a kind of case for the sore; at other times, again, they appear as lumps lying at their bottom or clustered like a chain around their circumference. The open mouths of fistulous passages, which run towards softening tubercles or indolent abscesses in the vicinity, are frequently to be observed on the surface, or under the loose edges of these ulcers. When this is the case, and the fistulæ are long and tortuous, the discharge is apt to remain, and occasion burrowing under the skin and the surrounding structures. It happens occasionally, also, though very rarely, that gangrenous eschars of a brownish-gray colour, are formed at the bottom of scrofulous ulcers. To conclude, in those cases in which the periosteum is exposed by the progress of scrofulous ulcers, this membrane swells and becomes covered with soft grayish-coloured fungous excrescences.

The progress of scrofulous ulcers is, in general, extremely slow; they frequently continue for years together without any material alteration in point of extent or otherwise. The ravages they commit, and deformities they occasion in some cases, although very extensive, are the work of so tardy a process, that their progressive amount is not perceived; it is only discovered in the end. Scrofulous ulcers differ visibly in this particular from those characteristic of lupus *exedens*, and of the serpiginous or *phagedenic* syphilis. Some cases, however, are on record, designated as *scrofula* (whether this disease were confounded with a lupus, or a syphilitic affection, or there existed an actual complication of one or other of these affections with true scrofula, or whether they were scrofulous ulcers that had been accidentally irritated, it is difficult to say), in which the progress of the disease is reported as having been much more acute.

738. Whether the cure of a scrofulous ulcer is accomplished spontaneously or under the ministration of art, it always takes place with extreme slowness. The surface of the sore looks less pale, its edges not so hard, not so livid, and are less disposed to bleed; it is then covered with granulations of a clearer rose colour, and the discharge becomes whiter and more consistent. The cicatrice that results long continues red, shining, easily torn, puffed and uneven. To this red colour of the scar, a bluish tint succeeds by slow degrees; its surface sinks, and its margins still puffed, often present irregular lumps in their course, a species of consecutive tubercles which are very long of disappearing. The skin frequently exhibits irregular bands which bear a great resemblance to the cicatrices of burns, and here and there numbers of whitish, rounded, and soft inequalities, produced by an excess of integument, and a lax state of the portions that have escaped alteration; these having been long distended and lost their elasticity, recover it very slowly, and are puckered up by the newly-formed cicatrices as they shrink and gain solidity. It is not till after the lapse of several years that the cicatrices of scrofulous sores become white, and that these puckerings of the skin disappear. As to the newly-formed bands, like those that follow extensive burns, they are never absorbed entirely.

739. Scrofulous ulcers are occasionally formed under, or in the neighbourhood of the nails (*scrofula unguealis*). Whether the phalanges of the fingers have been primarily swelled, softened, and ulcerated, or not, these scrofulous sores are generally observed to commence in a swelling which attacks the skin in the neighbourhood, of the nails, especially towards their roots. This swelling increases slowly and forms a puffy rim of a livid red colour, which ulcerates and grows fungous at a subsequent period. The bone of the last phalange frequently enlarges; the whole finger swells, and its extremity acquires

the shape of a little club. The nail then becomes misshapen, looks black, grows soft, and is partially detached. In this state the extreme round of the pulp of the finger enlarges and forms a kind of fungous ring, in the centre of which the diseased and partially loosened nail is perceived. The nail is at length thrown off, and an irregular reddish, naked surface is left, from which misshapen horny productions are thrown out. These often take a faulty direction, and by their irritation tend to keep up inflammation in the surrounding parts.

740. Individuals affected with scrofulous tubercles or ulcers, further, almost invariably exhibit other morbid phenomena characteristic of the *strumous constitution*. The most common of these are enlargements of the lymphatic glands, chronic inflammation of the edges of the eyelids, chilblains, sores, indolent abscesses, and white swellings of the structures about the joints, caries and tubercular affections of the bones, pulmonary and mesenteric tubercles, &c. Attention to these different symptoms may frequently be of service in doubtful cases, inasmuch as they lead us to the true nature of certain cutaneous and subcutaneous tubercles, and of the ulcers which succeed them.

741. Individuals who are the subjects of scrofulous affections are usually of fair complexion, with light or clear brown hair, large blue eyes, the pupils dilated, and the sclerotic coat of a bluish tinge; the point, and especially the alæ of the nose, and the upper lip are often thick and swollen; the nose secretes habitually in excess; the lips chap and become painful in winter; the teeth are disposed to get incrustated with tartar; the jaws are large; the cranium is often shaped like a calabash; the chest is narrow, the thorax generally contracted, the belly large, and the articulations bulky. One or several of these characters are very commonly observable; it is seldom that they all occur together. It is also to be observed that individuals with black hair and dark eyes, and who do not appear at all deficient in vigour of constitution, are occasionally seen the victims of scrofula, which appears then to be developed under the influence of the law of hereditary descent, or in consequence of insalubrious regimen.

742. *Diagnosis*.—The diseases with which the tubercles and ulcers of scrofula may be most readily confounded are the tubercles and ulcers of lupus, syphilis, and cancer. But independently of the fact that cutaneous scrofula is almost always accompanied by other alterations proper to the general affection, and by unequivocal indications of the strumous constitution, the tardy progress of scrofulous tubercles, which become inflamed internally, and then cause perforations of the skin, the pale and fungous appearance of the ulcers, and their violet and frequently loosened edges, admit of no mistake in the diagnosis.

743. *Prognosis*.—The development of a scrofulous tubercle or ulcer, however trifling its extent, is always a serious affair, for it is one of the manifestations of a constitutional disease, the cure of which is always effected with difficulty, which the progress of years may modify, but will rarely destroy completely, and which is frequently transmitted hereditarily, even when the principal characters of the affection have disappeared. In a particular case, the number, extent, and gravity of the concomitant lesions, when any exist, their character, and their development before or after the age of puberty, are so many circumstances, the due appreciation of which is of the highest importance in predicating with regard to the effects and final issue of the disease.

744. *Treatment*.—The basis of the treatment of scrofula may be thus laid down:—The first and main object must be to accomplish some modification of the constitution by means of appropriate regimen, habits, and exercises. Practitioners are generally agreed in recommending a warm climate and dry atmosphere, living in a healthy situation, exercise in the open air when the season and the weather permit, the use of the temperate or cold bath, dry frictions of the skin, &c. The diet requires particular attention. Good animal food:—beef or mutton, roasted or broiled; bitter, or, as they are termed, anti-scorbutic vegetables,—endive, water-cress, &c.; fresh eggs; roast poultry or game; fresh fish; good beer, or generous wine, mixed with some sparkling slightly chalybeate water, appear to compose the aliment and drink most appropriate to the scrofulous diathesis.

The action of certain therapeutic means have been found, when combined with these most indispensable and primary measures, to aid



their action and to hasten the cure of scrofulous affections. In the first rank of these additional remedies must be placed sulphureous sea-water, and iodated baths. Sulphureous water baths may be readily prepared and administered at all seasons, and their action regulated with the greatest nicety. Besides the general curative effects of these baths, they are found to preserve children from colds and chilblains during the winter, whilst in summer they brace the frame against the enervating effects of the heat. The tub in which this bath is administered, requires to be thoroughly cleaned out several times a year at least.

When sea-bathing is adopted as the principal curative means, patients, after having gone through the season, should be afterwards put into an alkaline bath at intervals, to cleanse the skin.

The preparations of iodine, administered by way of bath and internally, are often of singular efficacy in scrofulous complaints. Iodated baths, in which the iodine is held dissolved by means of the ioduret of potassium, act very advantageously locally, by their active principles being brought into immediate contact with the tubercles and sores, as well as generally, by the absorption of these into the system. I occasionally direct the iodated and sulphureous water-bath to be taken alternately. Whilst the iodine is employed externally in baths, this medicine is commonly exhibited at the same time internally, being begun in doses of half a grain during the first fortnight; three-quarters of a grain during the second, and a grain during the fourth. In every case the half of the dose is to be taken early in the morning; the other half before dinner.

745. The antiscorbutic syrup<sup>1</sup> in doses of from half an ounce to a whole ounce; the bitter tincture of gentian in doses of from two to three drachms; the infusion of hops and other bitters, are also very commonly prescribed for scrofulous children.

746. Other medicines, such as the hydrochlorate of baryta and of lime, the subcarbonate of soda, chalybeates, and mercurial preparations, have also been all severally and particularly recommended in scrofulous cases. (a)

747. The treatment of scrofulous tubercles and ulcers, by local means, although of less importance than that which is directed with a view to modify the constitution, is still deserving of very particular attention: the resolution and suppuration of the tubercles are accelerated by rubbing them with an ointment either of the deuto-iodide of mercury, or of the iodide of sulphur.

The ulcers are stimulated into better action by washing their surface with wine, a weak alkaline solution, or a sulphureous or iodated water, by dusting them over with citric acid, burnt alum, cream of tartar,

(a) Preferably to simple iodine, in the treatment of scrofula, is its combination with an alkali or metal, as in the iodide of potassium and the iodides of iron and zinc. The dose of the former, for a young subject, will be from a quarter of a grain to a grain gradually increased to three grains in the twenty-four hours, in watery solution. The favourite preparation just now, is the iodide of iron in the form of *liquor ferri iodidi*; as directed by the American Pharmacopœia. Dose, ten to thirty or forty drops, according to the age of the subject, twice a day in a little sugar and water. Biniodide of potassium and biniodide of iron are, also, of late well spoken of in scrofula; the former in a dose varying from half a grain to four, and even ten grains three times a day, according to the age of the patient.

Cod-liver oil is also one of the new remedies—nearly enough to have more virtues than it really possesses. For further details of practice in scrofula, and pathological views of the disease, the reader is referred to *Bell and Stokes's Lectures on the Practice of Physic*, vol. ii.

In subjects not very anæmic, and whose digestive system is not materially irritated, I can suppose that Donovan's solution given in small doses, watching carefully its operation, would be attended with resolutive and other good effects in scrofulous tubercles.

The formulæ of the stimulant, rubefacient and caustic solutions of iodine, recommended by M. Lugol for scrofulous ulcers, and of baths in the early stages of the disease, will be found in the different works on *Materia Medica*.

<sup>1</sup> A compound syrup of cochlearia amonica, bitter orange-peel, &c.—Tr.

calomel, &c., by covering them with poultices of sorrel, hemlock, seaweed, and various other topical applications, charged with sulphur or iodine. Fungous growths and loose edges require to be removed with caustic or the knife, when there seems no prospect of a better action, or an adhesive inflammation; a free passage for pus must be established, and fistulous passages laid open when they are discovered in the vicinity of ulcers; bony sequestræ must be searched for, if suspected, and extracted, if any be discovered, when the bones are affected, &c. To conclude, when by means of regimen, combined with internal and local treatment, the ulcers are brought into the condition of simple suppurating sores; their surface must be touched from time to time with the nitrate of silver, or sulphate of copper; their edges approximated by means of adhesive straps; and every attention paid to securing cicatrices that shall be as little unsightly, and cause as small an amount of deformity as possible.

748. Scrofulous sores about the nails occasionally prove obstinate to all these measures of general and local treatment, especially when the chronic inflammation of the matrix of the nail is kept up by the production and presence of the irregular horny substances that have been mentioned. In the severest cases there are puffing and softening of the unguiferous phalange, and this state is followed by such interminable fistulæ that some surgeons then recommend the amputation of the joint as the best and speediest way of getting rid of the evil; this last remedy, however, may generally be safely deferred indefinitely; the deformed nails that are thrown out being alone removed, and the progress of years confided in for bringing about the recovery of the part.

#### *Historical Notices and particular Cases.*

749. The principal morbid changes produced by scrofula, such as glandular enlargements, swellings about the joints, caries of the bones, indolent abscesses, fistulous passages and ulcers, &c., were long ago described with much care and precision; but it was in vain that treatises, *ex professo*<sup>1</sup> even, were searched in the hope of finding a good account of *cutaneous scrofula* in any of its forms, distinct and isolated, or in clusters, or even of *scrofula unguealis*. M. Alibert was the first who saw the propriety of forming the scrofulous affections of the skin into a distinct group.

M. Lugol has detailed a very interesting case of *tubercular cutaneous scrofula in clusters*, and several instances of scrofulous ulcers successfully treated by the preparations of iodine. Mr. Lemasson has published several facts in favour of the combined action of opium and iodine in the same class of complaints.

In several recent works, *scrofula unguealis* is vaguely hinted at, or noticed, mixed up with other varieties of onychia. M. Delpech,<sup>2</sup> however, perceived, and has stated his opinion broadly, that spontaneous onychia might be owing to a scrofulous affection of the matrix of the nails.

When any affection of the skin, other than the one I have described under the name of scrofula (acne, eczema, impetigo, &c.) occurs in an individual of strumous constitution, this condition of the system occasionally modifies the symptoms, and always influences the treatment of the eruption: these facts, however, do not authorize us in considering the accidental disease as a manifestation of scrofula. It is in this point of view that M. De Vering<sup>3</sup> appears to have pushed too far a consideration otherwise of the highest practical value.

CASE CXXX.—*Ulcerated scrofula. Stationary tubercles of the cheeks, and backs of the hands.* A girl, fourteen years of age, of a scrofulous habit, was brought to me for advice, May 10th, 1825. From the mother I learned that this girl had suffered, during the time of teething and subsequently, from sore eyes, which were long of getting well, and kernels under the chin. After her tenth year, several tubercles had also been evolved upon the face. When presented to me, the right ala of the nose, which was red and swollen, was covered with a yellowish-white scab, and the cheek of the same

<sup>2</sup> Hufeland. *Traité de la maladie scrofuleuse*, traduit par Bousquet, 8vo. Paris, 1821.

<sup>3</sup> *Chirurgie Clinique*, t. i. p. 374.

<sup>4</sup> Vering. *Manière de guérir la maladie scrofuleuse*, 8vo. Vienna, 1832.—§ Des maladies cutanées scrofuleuses.



side was occupied by three tubercles unulcerated, and a fourth whose centre was concealed by a thin brownish incrustation. A tubercle of the same description is seated on the left cheek. The skin of the cheeks in the vicinity of the *alæ nasi* is of a violet-red colour; the lips, especially the upper one, are swelled; the right eye is injected, and the edges of the eyelids are slightly glutinous; the submaxillary glands are enlarged. A large indolent, flat, violet-coloured unulcerated tubercle exists on the back of the right hand. The organs of the chief functions appear to be quite healthy. (*Weak infusion of gentian, and ʒi of the compound syrup of cochlearia daily.*) These medicines were taken pretty regularly for eight months. Towards the end of the treatment two applications of the powder of calomel and arsenious acid (*poudre de M. Dupuytren—vide § 725*) brought about the cicatrization of the ulcer of the nose. The tubercles of the cheek and back of the hand had disappeared, but the skin still continued somewhat swollen, and of a violet colour, in the situations which they had occupied.

CASE CXXXI.—*Scrofulous tubercles of the left forearm.*—Justine Geoffroy, aged twenty-six, of scrofulous constitution, never having had any serious illness. When thirteen years old she had had a small abscess on the left forearm. Six years later, a pimple (*bouton*), which she likened to a large pea, appeared in the same place, but got well in the course of six months. Last winter the patient suffered from chilblains, and the disease reappeared in the old place. At one time the catamenia ceased, and the sore on the forearm by bleeding seemed to supply this discharge. There have always been, and there still remain, several enlarged glands under the lower jaw on the left side.

April 5th, 1830.—On the dorsal aspect of the forearm, two inches above the wrist, numerous mammillary tubercles, isolated or disposed in clusters, and projecting above the level of the integuments, are perceived. Each cluster seems to rest upon a common basis, being separated from its neighbour by depressions or clefts, which are ulcerated in the points where they are narrowest. The surface of the tubercles is moistened with a purulent secretion, and in some places covered with a kind of bluish-coloured false membrane. The size of the mammillary eminences varies between that of the head of a pin and that of a large pea. Another cluster of tubercles, somewhat more numerous, occupying a larger space, and covered with indolent sores, is seen near the one above the wrist; and several isolated tubercles are scattered over spaces which are separated from each other by cicatrices of a general red or livid colour, but presenting whitish points here and there. Several more tubercles, covered with a small scab, also occur disseminated in the neighbourhood of the principal alterations, but still separated from these by bands of healthy integument. A few enlarged lymphatic glands are seen on the left side of the neck. The patient is in pretty good general health; the catamenia are regular. (*Tonic regimen; compression of the tubercular masses.*) April 12th.—The mammillated tubercles have shrunk under the effects of the compression, and here and there small scabs have been formed; a little yellowish pus is deposited between the masses. Next day the patient complained of having suffered great pain in the forearm, and a number of small irregular ulcers, a line or more in depth, were found checkering the mammillary eminences, and giving them the appearance of excrescences.

24th.—The compression appears to have increased the extent of several of the sores; the parts were touched with the acid nitrate of mercury. May 5th.—Compression was renewed on the first of this month, and the tubercles, more and more shrunk, were now almost level with the skin. The sores were getting well. June 18th.—Up to this date the whole of the sores had been gradually healing up, and were now all skimmed over; but on this day the patient complained of pain; the arm became hot; and the upper part of the cicatrice, which had continued of a purple colour, appeared beset with a number of pale yellow points, evidently consisting of purulent matter. These, next day, broke into small round ulcers, between each of which the skin looked pasty and infiltrated; many of them met by their edges on the day following, giving rise to broad irregular ulcers, with yellowish bottoms. Emollient cataplasms, and subsequently sulphur-baths were prescribed. The sores were all whole by the 18th of July, but small purulent points of the same

description, and ending in the same way, still made their appearance from time to time. The patient was discharged on the 12th of November, at her own request, not completely cured.

CASE CXXXII.—*Cutaneous scrofula. Tubercles agglomerated.*<sup>1</sup> César Mortreux, aged seventeen and a half, sprung of healthy parents, but born labouring under small-pox, which was in the family at the time of his birth, so feeble that till he was two years old, it was not supposed he could live. At this age the disease under which he now laboured made its appearance, and his general health seemed to improve. Scrofulous abscesses formed in the neck, buttock, thigh, leg and back of the left hand; the sore that resulted in the last-named situation was much longer of healing than any of the others, and when this was nearly well, scrofula, in another guise, took possession of the backs of the fingers, from whence it spread successively to the wrist, forearm and arm. Within the last fifteen months the disease has made very rapid progress, particularly since the insertion of an issue into the arm in the spring.

July 30th, 1828.—The skin on the dorsal aspect of the wrist was hard, hypertrophied, of a violet-red colour, and diminished in its sensibility; that of the back of the thumbs and remaining fingers presented growths from a line and a half to two lines in length, separated by chaps in the skin, and bathed in a grayish-coloured pus. These growths were covered on their tops with yellowish incrustations, which became soft when bathed, and were then readily detached, leaving the summits of the productions they covered of a delicate rose tint, and sensible to the action of the air. The matrices of the nails were deeply affected; the nails were long and all turned away from the thumb side of the hand; their dorsal surfaces were rough, and generally of a deep gray colour; those of the ring and little finger were entirely black. Patches of growths, of a similar description, two inches in diameter, existed on the dorsal aspect of the wrist joint; two on the inner surface of the forearm were of the dimensions respectively of a crown-piece, and three or four more of rather less size appeared on the posterior surface of the same part. Around the elbow there was an assemblage of at least nine principal patches, of a round shape, and varying from one to two inches in diameter, in general confluent, but in some places leaving narrow intervals in which the skin appeared to be in the normal state, though presenting here and there a few red pustules, which appeared to be the rudimentary forms of the disease; and, in fact, the whole of the patches did finally become blended together by the development of these pustules; so that the elbow was at last surrounded by a diseased surface, five inches in length, by about four in breadth, very similar in its appearance to the patches which have been already described, although the growths in this situation were neither acuminate nor isolated by chaps of the corion.

In addition to these diseased patches, a great number of small pustules were scattered over the forearm and arm. These pustules were generally of the size of pins' heads, though some of them were considerably larger; the latter, under the magnifying glass, appeared to be made up of two or three elementary pustules united. The patient informed us that the whole of the patches on the arm and forearm had been originally formed by the agglomeration and subsequent development of pustules still smaller and redder than those we were now examining. The patches of the fingers were the only ones whose mode of formation he could not recollect.

The skin of the limb generally was hypertrophied, indurated, dry, and presented more or less of a violet hue, especially on the back of the wrist, where it was also less impressionable than in other parts. The whole of the diseased patches that have been mentioned were primary; no one had ever healed, nor changed its place. Those on the fingers only had got well at one end whilst they were advancing on the other; so that the parts on the dorsal aspects of the fingers which were now healthy had once been diseased like those that still continued so. The disease had only once appeared to receive a check; it had even appeared tending to recovery: about the age of eleven, in the month of August, the growths shrunk, the suppuration became greatly lessened, and even ceased entirely for a time during the winter; but on the return of the fine weather the disease also

<sup>1</sup> Iconographie pathologique, in-fol. Paris, 1829, pl. 4. Obs. de M. Lugol.



returned, and has since continued to advance uninterruptedly. The patient has never suffered from local pain, neither has his sleep been once disturbed in the last fifteen months during which this *cutaneous scrofula with morbid growths (scrofula cutanée végétante)* has been spreading with alarming rapidity over the left arm.

Besides the scrofulous cicatrices, of which mention has been made, Mortreux had prominent cheek bones, a thick nose and upper lip; but his skin was bronzed and swarthy, his hair brown and thick, and he showed a generally strong and well-knit frame. The digestive organs were healthy, though the bowels were habitually confined.

The disease was at first treated by iodine and iodide of potassium externally, and iodine internally. The external application was followed by pain and paroxysms of pruritus of the most violent description which were frequently renewed in the course of the day. This treatment, continued for six weeks, did little good, and it was then determined to treat the disease locally in four different ways: 1st, with the iodated iodide of potassium in friction over the elbow; 2d, with the proto-iodide of mercury in friction over the fingers; 3d, with the white oxide of arsenic in friction over the anterior aspect of the arm; and 4th, with the acid nitrate of mercury as an escharotic, over the posterior surface of the limb.

The inunction over the elbow was attended with extreme pain, and the most violent pruritus, and occasioned a very profuse secretion of pus. The growing pustules, however, shrank away. The more circumscribed patches became covered with incrustations, and only secreted a little matter about the centres of the diseased surfaces, which also appeared on the way to recovery. The inunction over the fingers proved less efficacious; nevertheless the diseased patches healed around their circumferences, and the neighbouring skin appeared to differ less from the standard condition. The application of the acid nitrate of mercury succeeded the best of all, especially in regard to a patch situated on the outer surface of the wrist, which had at first been rubbed with the proto-iodate of mercury, a plan of treatment under which it had at first improved rapidly, but soon became stationary. This patch is now (Dec. 29, 1828) nearly healed, after five applications of the escharotic made in the course of nearly two months. The arsenical application seemed to do much good in the first instance, but the amendment did not make any progress. An additional dose of the white oxide of arsenic did not seem to give the medicine any new power over the disease; and as this was a circumstance I had observed in a great number of cases, I ordered this part of the treatment to be given up, and frictions with the iodated iodide of potassium, which had been employed over the elbow with progressive success, to be substituted in its stead.

The watery solution of iodine was administered internally in graduated doses, until a grain of the medicine was taken daily. This quantity has been taken for a month. The other curative means employed were baths for the arm, of a decoction of bark, and a decoction of bran, with the addition of sulphuret of potash; three sulphureous baths were also taken through the week, and three ounces of the compound syrup, or wine of cochlearia, every morning, together with a pint of barley-water, made palatable with syrup of tartar, as drink during the day. Let us just observe, before concluding, that the most efficient of the local measures excited profuse suppuration. I have had occasion to witness this property of the iodine in a very great number of cases. The acid nitrate of mercury also causes a very copious purulent secretion, which makes its way through the eschars, causes them to fall off, and produces incrustations, which, as the diseased surfaces get well, are subsequently less and less frequently renewed.

CASE CXXXIII.—*Scrofula unguæalis*.<sup>1</sup> A villager, aged twenty-four, who had suffered in his youth from indolent abscesses and other symptoms of scrofula, began to complain towards the end of the year 1820, of pain and swelling in the great toe of the left foot, to which succeeded a sore, which at first surrounded the root of the nail, and then extended under it; so that at length the nail became loose, and detached at all points, except its posterior edge. The nail itself was soft, filamentous, readily torn, and was turned back towards the dorsal aspect of the foot; it seemed, like a foreign body in the midst of parts in a state of ulceration, to keep up their irritation: attempts had con-

sequently been often made to destroy it entirely by taking it away; but it was speedily reproduced with the same defective structure as before. This state of affairs continued to January, 1822. The patient was received into the hospital Saint Eloi, at the same time as another patient, labouring under a syphilitic affection of the matrices of the nails. The appearances in these two cases were the same; but the cause, and consequently the essential conditions in each were very different. The scrofulous patient had never run the risk of a venereal affection, &c. He was put upon a diet of animal food and wine, and took bitter and tonic medicines alternately with one of the alkalies: gentian, bark, oxide of iron, and carbonate of soda, were the articles employed; emollient cataplasms and local baths were at the same time prescribed. At a later period, baths, with a solution of the carbonate and even of the pure potash, were tried; the baume vert de Metz,<sup>2</sup> a solution of the muriate of mercury, and then of the nitrate of silver, were one after the other used as transient stimuli. The patient continued under treatment for nearly four months, but the effects of the system pursued were ultimately as favourable as those that followed in the case of syphilitic origin alluded to, under the influence of mercurial preparations. The sore cicatrized, and the nail was reproduced with its pristine consistence, its colour, and nearly its shape.

## CANCER.

Vocab. *Cancer, Noli me Tangere, &c.*

750. Cancer of the skin is proclaimed by one or more tubercles, which, after an interval of time, greater or less in extent, become the seat of acute lancinating pains, and end in ulcers, the surfaces of which sprout in the form of fungi, or, otherwise, which deeply destroy the skin and neighbouring parts. These tubercles consist, in part at least, of scirrhus tissue, or cerebriform matter, the presence of one or other of which constitutes their distinguishing anatomical character.

Cancer of the skin shows itself under five principal forms. 1st, cancer *vulgaris*, or common cancer; 2d, *melanic* cancer (*anthracine*); 3d, *leucoid* cancer; 4th, *mollusciform* cancer; 5th, and lastly, *verrucous* cancer (chimney-sweeper's cancer).

751. Cancer *vulgaris*. The tubercles that characterize this variety may be isolated and solitary, or numerous, and either collected in clusters, or widely disseminated. They are most frequently evolved on the hairy scalp, face, lips, nose, margin of the anus, and about the genital organs. They vary from the size of a grape stone to that of an olive. They are hard and solid, and in their earlier stages do not differ from the surrounding skin in colour. They are occasionally observed to continue indolent for several years; or, from the very date of their appearance, to be the seat of violent pruriginous sensations, or of lancinating pains. Accidentally irritated, these tubercles enlarge, grow livid, and constantly occasion acute suffering, though they may have remained perfectly indolent up to this period; their bases then widen, and extend more deeply; chaps form on the surface, which, at times, pour out some yellowish and sanguinolent serum; under other circumstances, again, the cuticle covering the tubercles is detached from the corion, by the effusion under it of a serous fluid, and the exposed summits of the tubercles then become softened and ulcerated.

752. The ulceration that succeeds, presents itself under three distinct forms: 1st. The ulcer, of varying depth, exhibits a fungous and uneven surface, which, by exposure to the air, becomes hidden under a brownish incrustation; its edges are hard and everted, and the surrounding skin is frequently traversed by small blue veins—the *chancre-like* cancerous ulcer. The pain of a lancinating kind is usually very severe at this period, and is sometimes compared by patients to the passage of red-hot needles through the seat of the disease. Left to itself, the ulcerative process continues to advance among the neighbouring parts. One-half, and more, of the face, has thus been seen destroyed by these *eating* or *phagedænic* cancers, which several pathologists have characterized by the title of *noli me tangere*. 2d. At other

<sup>1</sup> Delpech. Clinique médicale de Montpellier, 4to., t. i. p. 367.

<sup>2</sup> A terebinthinate liniment of the sub-acetate of copper.—Tr.



times the surface of the excoriated tubercle becomes covered with small mammillated elevations, which give it very much the appearance of a mulberry, a state in which the disease may long remain stationary. In this case there are commonly several cutaneous and subcutaneous cancerous tubercles disseminated over the surface of the body. These *mulberry* cancers occasionally attain the size of a walnut; the fluid they secrete dries upon the surface in layers, which, by accumulating, form, at length, prominent scabs, occasionally a little twisted, which have been likened to, and entitled, horns. These scabs are detached by and by, and the tubercles are succeeded by *chancre-like* ulcers. 3d. Under still other circumstances, the growths that spring from the surface of the excoriated tubercles, are much more considerable than in the variety last described, and a tumour results, having a fungoid appearance, and secreting a sanious or sanguinolent fluid from its surface; this constitutes the *fungiform*, or *fungoid* cancer of pathological writers. Where the morbid growth expands superiorly, whilst its neck retains the original dimensions of the ulcerated tubercle, the disease has been entitled *pediculated* cancer. This variety is in general less painful than the phagedænic cancer. It is also almost always solitary. 4th. There is another mode, much more rare, indeed, in which I have seen cancerous tubercles terminate; this is in *gangrene*. The woman in whom this occurred, laboured under a tumour of the right ovary, cancer of the right breast, and cancerous tubercle above the left eyebrow. This tubercle, on a sudden, became very painful, assumed a deep-brownish or dusky-red colour, and losing all sensibility, it came entirely away with the diachylon plaster I had applied to its surface. The tubercle thus detached, exhaled a distinctly gangrenous odour. The resulting sore suppurated kindly, and by and by healed up completely of itself.

753. The tubercles of common cancer are frequently evolved in the *subcutaneous cellular tissue*, where they appear under the form of small movable tumours like grains of wheat, which is painful under pressure. These subcutaneous cancerous tubercles, which must not be confounded with the small tumours occasionally developed in the course of a nervous twig, sometimes continue stationary for an indefinite period; at other times they increase until they equal an egg in size, when they usually become attached to the skin, in which a very remarkable vascular network is then frequently developed. By and by the integument inflames, softens, and gives way, and a fungous growth, after a certain lapse of time, very commonly makes its appearance from the bottom of the ulcer.

754. The tubercles of common cancer have particular anatomical characters. If at their commencement they appear to consist of a mere thickening, with induration of the corion, the indurated parts, at a later period, acquire a considerable resemblance to a mass of lard (*scirrhus*). When they are incised lengthwise, and their interior is examined under the magnifier, they are found principally to consist of a lardaceous tissue, traversed by whitish lines or bands, analogous in point of colour to the fibro-cartilages. After maceration, these tubercles, stripped of their cuticular covering, almost always present a mammillated surface. When they are softened in a slight degree, a whitish matter can be forced out of them by pressure. Besides the peculiar scirrhus tissue which has now been described, cerebriform matter is frequently met with in these small cancerous tumours.

755. Melanic Cancer (*Anthracine* Jurine). Under this title have been described certain small tumours of a melanose appearance, which approximate those of an undoubted cancerous nature in the acute pain which accompanies them, in their tendency to ulceration, and in their disposition to grow again when they have been extirpated. These small blackish and painful tumours would seem to be distinct in their nature from those of pure melanosis, which are most commonly indolent, and occasionally evolved in the corion, as well as in the subcutaneous cellular tissue. Yet if they bear affinity to cancer in their symptoms, and in their tendencies, a lack of exact and often enough repeated anatomical inquiries, leaves us still in doubt whether or not they, like certain cancerous tumours of the liver, contain a mixture of scirrhus tissue or of encephaloid matter, with a portion of melanic substance; perhaps they constitute a mere variety of the melanose tumour. However this may be, these little tumours, according to Jurine, begin as minute black or bluish, and usually itchy spots, which take the form of tubercles slowly, and subsequently

acquire that of true *tumours*, the centres of which are generally more depressed than their circumference.

The tubercles of this variety of cancer sometimes partially lose their original black colour; their base acquires a bistery hue, and their centre something of an olive shade. They scarcely attain the size of a strawberry in some cases, before the integuments give way, with acute and lancinating pains; an ulcer, with fungous and ragged edges, is formed, which pours out a sanguinolent sanies habitually, and at times bleeds profusely. Ulcers of this description are as inveterate as those of common cancer, and M. Alibert is of opinion that the species of tumour which occasions them is even more apt to be reproduced, when extirpated, than those of the other varieties of cancer. Repeatedly, and after cures that were believed to be complete, black points have been observed to appear in the neighbourhood of the cicatrices, which were never long afterwards of spreading and becoming open ulcers.

756. Messrs. Marjolin and Blandin,<sup>1</sup> under the name of *melanic* cancer, have described a subcutaneous tumour, consisting of a hard mass, which occupied almost the whole of the palmar surface of the right hand, and extended over a portion of its dorsal aspect; this tumour was irregularly rounded, lobulated, and traversed by a longitudinal furrow; it was accompanied by pain of a lancinating kind, and its centre, which was ulcerated, uneven and of a livid hue, poured out a fetid ichor. The hand was successfully amputated by M. Blandin. The tissue of which the tumour consisted was hard, of a slate gray, or blackish tint, *creaking under the scalpel*, and under pressure yielding a fluid which stained linen like China-ink; the deep-seated veins of the palm were very much enlarged.<sup>2</sup>

Under the name of *melanic sub-ungual* cancer, M. Dubourg<sup>3</sup> has given the details of a spherical tumour, four inches and a half in circumference, of a blackish colour, mammillated on its surface, the seat of lancinating pains, and presenting here and there erosions, from which slight hemorrhage occasionally took place. The disease had commenced thirty years previously without evident cause: a small black line made its appearance under the nail of the little finger; this continued stationary for twenty-seven years; during the last three years only had it extended, and by degrees spread to the whole surface covered by the nail. At the end of a year the nail was detached, and was succeeded by black fungous excrescences, which increased rapidly in size, assumed a globular form, and exhaled a fetid smell. After amputation, the tumour was found very similar, in its colour and consistency, to a large softened truffle; a larger quantity of fluid than of solid matter, entered into its composition.<sup>4</sup>

M. Lisfranc once removed a melanic cancer, the size of the fist, from the left cheek. The tumour, which was uneven on its surface, had been the seat of pretty severe lancinating pains; it had grown very rapidly, and was accompanied with an enlargement of the sub-maxillary glands. The skin, in its vicinity, was of a violet colour.<sup>5</sup>

757. Before bringing this subject to a close, I think it right to state that if some pathologists, taking the character of the pain with which these melanic tumours are generally affected, their termination, in a very great number of cases, in a fungous ulcer of bad character, and their disposition to be reproduced after having been extirpated into account, have held themselves authorized to consider them as a variety of cancer; others, on anatomical grounds, and insisting especially on the fact of no scirrhus tissue, nor cerebriform matter having been demonstrated in their composition, have assigned them their place along with the melanoses. For my own part, it seems to me evident that certain soft and indolent melanic tumours ought to be separated entirely from cancer; but I think, on the other hand, that those which are attended with lancinating pains, which shoot again

<sup>1</sup> Journ. Hebdom., t. iii. p. 459.

<sup>2</sup> I have noticed this case with a view to show that *melanic* tumours are nearly akin to those of a decidedly cancerous nature, as regards the character of the pain that attends them, the appearance of the ulcers to which they give rise, and the hardness of their tissue.

<sup>3</sup> Journ. Hebdom., t. vii. p. 73.

<sup>4</sup> In its structure and softness, this tumour is assimilated with the melanoses, and in two of its phenomena (*lancinating pains, and fungous growths*), with cancer.

<sup>5</sup> Revue méd., t. ix. p. 189. As in cancer, lancinating pains and glandular swellings are observed in this case.



after their extirpation, and which are of so firm a texture as to creak under the scalpel, have a very great analogy to cancer.

758. *Leucoid cancer*.—I shall, by and by, give a case of this rare variety of cancer which differs from all the others in the milky-white colour of its tubercles. Of these, some are flat, depressed in their centres, and prominent in their edges, which are covered with vascular ramifications; others, again, are rounded, and vascular in the centre, whilst their circumference is of a milky-white colour melting gradually into that of the skin (Case CXXXVII). Under the magnifier, these tubercles appear to be formed by a kind of hypertrophy of the corion, with the infiltration of a milky fluid, and the accidental development of the minute blood-vessels of their centre or circumference. Like the preceding variety, this one appears to proclaim a cancerous diathesis, which is manifested at the same time in other organs.

759. *Globose cancer* is characterized by small globular tumours, of a reddish or violet hue, bearing some resemblance in their external appearance to whortle or juniper berries. M. Alibert<sup>1</sup> has given the case of a woman, in whom a multitude of small tumours of this description made their appearance, some on the scalp, others clustered on the top of the right shoulder, others again scattered over the parietes of the abdomen, over the thighs, legs, and soles of the feet, all presenting the same appearance and possessing the same characters. The patient died under a lingering and painful consumption. The tumours, when cut into, were hard, of a yellowish-white in their interior, and very like lard, both in colour and consistency; some were black on the surface and ulcerated in the centre. To this case, two others, also related by M. Alibert, and one which I shall myself detail by and by, must be assimilated; my case, however, differs from the rest in this, that the small globular tumours consisted of cerebri-form matter, of a pinkish-white, or milky hue (*d'un rose blanc ou laiteux*). This variety of cancer, in which the disease is developed in so singular a manner on the surface of the body, is always a very serious affection; and although a patient labouring under it may now and then be found in the enjoyment of apparently good health, the external disease is certainly significant of a diathesis, which will silently but surely implicate some vital organ at a future time, and make the individual its victim at length.

760. *Mollusciform cancer*. This variety is distinguished by tubercles flattened in their form, or slightly rounded at their centre, indolent in their nature, of the same colour as the skin, and of a size varying from that of a silver twopenny to that of a half-crown or a crown piece. Their surface presents wrinkles or furrows, which are circular and concentric on those of small and middling dimensions, and irregular on those of the largest size. The anatomical character of this variety is a thickening, often very considerable, of the corion, the tissue of which becomes hard and scirrhus in its consistence. I have observed this variety, which, in its external characters, bears great analogy to one species of molluscum, in a woman, whose body, after her death, was found to present several other alterations of a cancerous nature (Case CXXXVI).

761. *Chimney-sweepers' cancer*. *Warty* or *chimney-sweepers' cancer* has been observed to attack the skin of the lower part of the scrotum with especial frequency. It begins in the shape of a warty excrescence, which very commonly continues stationary for several months, and even for several years. After a lapse of time, of various extent, the excrescence pours out an ichorous fluid, which excoriates the surrounding skin, its centre ulcerates, and, although not deep, the sore very soon exhibits all the characters of cancer in the most unequivocal form. Its edges are hard, raised, sharp, as if cut with a pinking iron, and everted; the surface of the sore has an unhealthy appearance; it is covered here and there with fungous growths, and is affected with pain of a greater or less degree of severity. As the disease advances, the neighbouring parts become affected, and the whole scrotum may at last be implicated; or the disease may extend along the perineum; the proper coats of the testis are also occasionally affected; the disease then usually extends to the body of this organ, creeps along the spermatic cord to the inguinal glands, and gains the abdominal viscera. When one of the testes is affected in

this way, it becomes bulky, and very hard, and contracts strong adhesions to the diseased scrotum; the ulcerative process soon gains its substance, and portions of it even slough out. In these cases, the fungous growths, which spring up so rapidly when the disease is confined to the scrotum, are but rarely observed. Both testicles are sometimes simultaneously affected in this way. In proportion as the disease extends its ravages, whether it has been left to itself or have recurred after one or more attempts to excise it, the constitution is insensibly deteriorated; worn out by incessant suffering and want of sleep, the strength of the patient gives way; he loses flesh rapidly; the skin presents a peculiar leaden cast of colour, and is at the same time bedewed with profuse perspiration, which exhales an ammoniacal odour, always to be recognized again after it has once been felt; the fatal termination is very often preceded by an acute affection of one or other of the viscera.

762. This species of cancer is only met with in individuals whose skin is habitually irritated by the contact of *soot*, whence its vulgar name of *soot wort*. It occurs most frequently on the lower part of the scrotum, where the irritation would seem to be most constant, from the confinement of the soot within the wrinkles of the skin. The disease has been observed on the wrist in a gardener who was in the habit of using soot largely every spring for the destruction of snails. It has also been several times seen on the face. *Chimney-sweepers' cancer* is most frequently observed among persons between thirty and forty years of age, but as children are mostly employed in the business of sweeping chimneys, this occupation, as Mr. Earle has very well observed, is not the sole condition necessary to the development of the disease: a peculiar susceptibility or predisposition is required in addition. Although the disease has been almost exclusively seen among chimney-sweepers and those who traffic in soot, it has been said that the smelters of certain metallic ores containing arsenic, are subject to a disease of the scrotum of a similar description.

763. I subjoin a few remarks on cancer studied comparatively in its development and progress on different districts of the skin.

1st. Cancer of the *hairy scalp* has been chiefly observed among the aged; this region seems more subject to the globular form of the disease than any other. When the tubercles which characterize the affection have attained a certain size they are distinguished from steatomatous formations by the sharp lancinating pains with which they are affected, whilst steatomata are always indolent.

Cancer *vulgaris* has also been seen upon the hairy scalp, ending in a phagedænic ulcer, whose ravages extended even to the bones of the cranium.

2d. Cancer of the *skin of the nose* frequently begins in the form of a tubercle (cancer *vulgaris*) developed on the lachrymal sac, or over the lobe, the ala, or root of the member. This tubercle is at first of the same colour as the skin; a number of minute vascular ramifications then appear on its surface; it next becomes red, inflamed, ulcerated, and covered with a brownish and rather adherent incrustation; when its surface escapes all accidental irritation, it sometimes continues stationary for several months and even for several years, the skin that surrounds it neither inflamed nor marked by the ramifications of dilated veins. This cancerous spot is frequently purely local, and independent of any other affection of the same kind, as I had an opportunity of ascertaining in the body of a woman, affected with a cancerous tetter, &c., of the left ala nasi, who died of accidental pneumonia.

Cancer of the nose is often more rapid and destructive in its progress, gnawing the cartilages and consuming the skin. Cancerous masses are also seen evolved underneath the skin, about the root of the nose, which is then observed to be traversed by varicose veins; after producing external deformity in this way, these masses are very apt to extend to the nasal fossæ, where they commit great havoc.

3d. Cancer of the *lips* is proclaimed by a common or melanic tubercle, which is almost always evolved on the lower lip. When this tubercle becomes ulcerated, it pours out a small quantity of sharp ichor, which dries into a grayish or yellowish scab. So long as the ulcer implicates the skin only, it does not extend otherwise than superficially; but when the mucous membrane of the lip is implicated, the sore extends rapidly, penetrates the cellular substance deeply, and destroys the muscles and all the other tissues of the face.

<sup>1</sup> Nosologie Naturelle, 4to., t. i. p. 548.



4th. Cancerous tubercles of the *cheek*, usually flatter, and more indolent than those of the lips, end in ulcers that show a particular disposition to spread superficially. The sore in this case is commonly chapped on the edges, around which creep many varicose veins, and is covered with a yellow or grayish scab; it is only attended with shooting, and not very severe pains at distant intervals. I have also observed cancer of the cheek developed in the form of a fungus.

5th. One or more small tubercles are often found in the *skin of the mamma*, when the gland is itself affected with cancer. These tubercles are commonly flat in their forms, and of a dull white or earthy colour—they resemble, in a word, the leucoid or mollusciform variety of cancer.

6th. The cancerous tubercles of the *extremities* are almost always of a violet colour, and surrounded by varicose venous ramifications. They are particularly apt to occur in those parts of the skin which are morbidly altered; in *navi*, for example. A woman was brought to me for advice, upon the calf of one of whose legs there was a cancerous fungus of the size of an apple. The patient assured me that this growth had been developed upon a blackish pigmentary *navus*, similar to two others, the size of a bean respectively, which existed on the inner part of the thigh of the opposite side. This cancerous tumour was not surrounded by any varicose veins, and the patient, the mother of several children, was actually suckling one of two months' old.

7th. Cancer of the *palm of the hand* and *sole of the foot* generally possesses the character of the melanotic species.

8th. The cancerous tubercle of the skin of the *anus* is commonly single, and situated on some point of the circumference of this passage. It is very frequently accompanied with a chronic inflammation of the rectum. Of course, it is a matter of great importance on no occasion to confound tubercles of this character with hemorrhoidal tumours, or growths of syphilitic origin.

9th. Cancer of the *prepuce* almost always commences as an indolent tubercle; irritated by the sexual act, or the friction of the clothes, it enlarges, becomes painful, and terminates in a fungous ulcer, the surface of which secretes a fœtid and ichorous fluid. Cancerous tubercles of the *vulva* are evolved, and ulcerate in the same manner.

10th. Cancer of the *glans penis* sometimes begins as a warty excrescence, or fungous tubercle. It is frequently accompanied by enlargement of the lymphatic glands of the groin.

764. Cancerous tubercles, and sores of a cancerous nature, are often accompanied with alterations of the same description, developed most commonly in the lymphatic and other glands, in the vicinity of the parts affected; these lesions may be either primary or secondary. We almost always remark, moreover, in individuals labouring under old and inveterate cancer, deep traces of a constitutional affection, of a *cachexia cancerosa*, as it has been named; the skin has an earthy or sallow complexion; the patients are emaciated, &c. It must, nevertheless, be confessed that these constitutional symptoms are in general rather rare among individuals attacked with cutaneous cancer, unless the disease, in consequence of the existence of a truly cancerous diathesis, is simultaneously developed in one or several of the viscera; the implication of these organs necessarily causes considerable disturbance in the principal functions at once, and ultimately inevitable death. (a)

(a) Into the detailed history of cancer, and an exposition of existing opinions of its origin, structure and progressive changes, it is not deemed necessary to enter in this place. Some additional light on the subject has been lent by the recent labours of Hodgskin, Carswell, Cruveilhier, Gluge, Muller and others. A good summary of the Anatomy, Physiology, Pathology, and Treatment of Cancer, by Dr. Walshe, will be found in an article in the *Cyclopædia of Surgery*, and subsequently brought out in a separate volume by Dr. J. Mason Warren, with additions. In the article "*Cancer*," in the *Dictionnaire de Médecine et de Chirurgie Pratiques*, and in the *Diction. de Médecine*, and "*Scirrhus*" in the *Cyclopædia of Practical Medicine*, the reader will find abundant details arranged in a methodical manner.

On the special divisions of cancer of the skin, treated of in the text,

765. *Causes*.—Cancerous tubercles have been known to be formed in the substance of the skin, in consequence of local irritation; but in by far the greater number of cases, these little tumours have appeared slowly, and without any assignable cause. Cancerous tubercles are rarely met with before the age of puberty; they even occur much more frequently between the fortieth and sixtieth years than at any other time, and in subjects of a bilious temperament, although even numerous instances of their development among the youthful, and persons in the flower of life, might be quoted. Cancer is occasionally a hereditary disease, and is often seen evolved under the influence of long-continued depressing moral causes. The disease is not contagious.

766. *Diagnosis*.—The tubercles of lupus, of Greek elephantiasis, and of certain forms of syphilis, are almost always indolent, and unattended with suffering; those of cancer, sooner or later, become the seat of severe lancinating pains. Cancerous tubercles differ in their appearance from warts; the cuticle is usually thickened, and cleft on the surface of these last, which are also almost always numerous and indolent, and never fall into a state of ulceration spontaneously. Those painful subcutaneous tubercles, which have been entitled *neuromata*, occasion, from their very commencement, pain of a much severer character than cancerous tubercles of the skin—pain which is likewise propagated to a distance, in the direction of the nervous twigs upon which they happen to be developed.

Dr. Walshe imparts little additional information from that given by M. Rayer, who is, by the way, largely quoted by Dr. W. The remarks of the latter on one of the varieties of cancer are not without interest.—I give them in the words of the author.

"From the uncertainty referred to has arisen some difference of opinion respecting the true nature of the disease termed 'chimney-sweepers' cancer.' According to our views, this affection may, or may not, be cancerous, and, in the latter case, may be so either primarily or secondarily; primarily, if it originate in true scirrhus infiltration or excrescence; secondarily, if the ulcer produced by simple irritation become the seat of scirrhus or encephaloid formation. Of the cancerous nature of the specimen, in which we discovered the following appearances immediately after excision, no doubt can be entertained. Four layers might be distinguished in the mass removed from the scrotum: 1, a stratum of firm laminar cellular membrane, presumed to be healthy; 2, the deep layer of the morbid structure, consisting of an indurated substance as resisting as fibro-cartilage, creaking like that tissue when the point of a scalpel was rubbed along its divided surface, and possessing a linear arrangement—the fibres being perpendicular to the base; 3, a stratum of much softer material, of yellowish-white colour, lobulated, and somewhat of a fungous aspect; 4, a viscid coating of ichor, of a brownish-gray tint. These layers, more closely examined, presented the following characters. 1. With a common lens, a distinct partition of the cellular layer, by white opaque septa, enclosing yellowish and more transparent matter between them, was plainly discernible. Under a microscope of 150 powers, a particle of this putative normal tissue was found to consist of cells, some irregularly shaped, others pentagonal, and containing a distinct nucleus with nuclear corpuscles. A number of minute bodies, without internal cavity, (granules of Müller,) floated free; in one part, an elongated mass, with exactly the appearance of the fibrous matter of carcinoma fasciculatum, presented itself; it had the transparent character of that product." 2. In the fibrous or linear part, caudate corpuscula, with or without nuclei and nuclear corpuscula, were abundantly seen. These were associated with cells of the description frequently referred to. 3. In this layer, a fibrillar stroma constituted a most remarkable feature. 4. In the ichor, we observed, in addition to nuclear cells, curved caudate corpuscles."

<sup>1</sup> This shows distinctly that the germina of cancer (for here they probably extend much beyond the part examined, which almost presented the grosser characters of the disease), are occasionally left behind in tissue, which appears at the time of operation to be perfectly healthy. A remark of the same kind has been made by Gluge: "It is not only," he says, "in the encephaloid tissue itself, of affected organs, that its globules are found; they are also to be discerned in parts apparently healthy; for example, in portions of encephaloid lungs, which still retain the property of crepitating."—(*L'Institut*, No. 191, Jan. 4, 1837.)



The tubercles of melanic cancer differ from pure melanosis developed in grains, by being accompanied with lancinating pains, which melanosis never is. Leucoid cancer has a characteristic appearance, which distinguishes it from every other disease. Mollusciform cancer cannot well be distinguished from the disease called molluscum, unless where symptoms, or other alterations of an unequivocally cancerous character, are observed at the same time.

The ulcers of lupus, of Greek elephantiasis, and of syphilis, do not occasion pain of the same description as cancerous sores, and are, moreover, accompanied with various phenomena which contribute to distinguish them. In other and more simple cases, the diagnosis may even remain for some time uncertain. I once saw a small fungous sore, nearly six lines in breadth, and of a cancerous appearance, situated towards the outer angle of the eye, below the level of the under eyelid, which had existed for a month, having followed a *spot* that had become excoriated; but the long continuance, and particular appearance of this sore, were solely owing to neglect of proper cleanliness, and to irritation kept up by the nails of the patient; for I succeeded in healing it up in the course of a month, by means of emollient applications, and the use of the simple tepid bath.

767. *Prognosis*.—It may be stated, generally, that cancerous tubercles of the face, lips, and *alæ nasi*, are less serious affections than cancer of the glands; when extirpated, the disease is also less apt to recur. Melanic tubercles, however, form a marked exception to this rule; the disease in this form being particularly apt to be reproduced. Cancerous ulcers of the face, trunk, extremities, genital organs, &c., are beyond the reach of art when they have extended so far as to make it impossible to remove with the knife or caustic, the whole of the parts which the disease has implicated. When a very large number of cancerous tubercles are developed in the skin, it may always be taken as evidence of the existence of a cancerous diathesis, which sooner or later will extend to the viscera, and prove inevitably fatal.

768. *Treatment*.—When one, or a very small number only of cancerous tubercles have been evolved within a short time upon a particular district of the skin, we have of late been advised to attempt their resolution by means of local bleedings, of emollient or narcotic applications, and the administration of gentle laxatives. I have little confidence in this mode of treatment, the value of which has been singularly over-rated; I have tried it several times, but without once obtaining the complete dissolution of a cancerous tubercle; forty leeches applied in the course of eight days around a tubercle recently evolved, failed to effect the slightest diminution in the size of this production; in one case only did a cancerous tubercle of the nose shrink temporarily under the influence of the abstraction of blood; in consequence of a cold it enlarged again, and the patient having died shortly afterwards of an acute disease, I was enabled to ascertain that the tubercle contained cerebriiform matter.

Dr. Recamier has given a case of cancerous tubercle in which cauterization and compression were employed with advantage. In the majority of instances, however, it is better, when the cancerous nature of a tubercle has been well established, to remove it with the knife at once. A multitude of cases show that tubercles of this description evolved in the skin of the cranium, of the face, and other regions of the body, may be extirpated with complete success. The existence of some lesion of the viscera or their membranes could alone contra-indicate such an operation. A multiplicity of tubercles need prove no obstacle to their removal, for they may all be taken away one after the other in a very short space of time, if no other symptom of a cancerous diathesis be present. When the wound which results from the extirpation of a cancerous tubercle cannot be healed by the first intention, I am of opinion that instead of dressing it simply, like a common suppurating wound, it is better to cauterize its surface with the acid nitrate of mercury, or even to cover it with the arsenical paste. Cancerous tubercles in a state of ulceration, in young or middle-aged subjects, may also be attacked with the scalpel, whenever it appears possible to remove the whole of the structures affected, and when the disease is not hereditary. After the operation, I should always recommend the use of caustic in these particular cases. And I have fancied that relapses were less frequent when, under such circumstances, a caustic issue was made in the arm or leg, either before or shortly after the operation.

769. When cancer of the skin, after having destroyed in succession this tissue, the subjacent cellular substance and the muscles, extends to the bones, to the cartilages, conglobate and conglomerate glands, or to the tissues in the vicinage of its primary seat, or when it occurs among the aged, or individuals who present marks of the cancerous diathesis, the disease can neither be successfully attacked by the knife nor by caustics. Nothing more can then be done, in fact, than to endeavour to assuage the acute and incessant pain which the patient endures. The necessity of employing anodynes, in large doses, for a great length of time, and the no less evident necessity of sparing the digestive organs the paralysis of their powers, induced by the habitual use of opium, led me to recommend, in these desperate cases, the application of small doses of the acetate of morphia to the surface of the sores, or of the corion at any point where it happened to have lost its cuticle: experience has satisfied me of the advantages of this mode of using the narcotic.

770. Many different medicines, of various degrees of activity, have in their turn been spoken of as calculated to modify the *cancerous diathesis*, to favour the resolution of cancerous tubercles, or to heal up cancerous ulcers. Arsenic, in one or other of its forms, has been tried internally by Loder, Lentin, Selle, Tode, and others; I have prescribed many of these myself, but in vain. I have also tried the preparations of hemlock, which have been lauded in this class of complaints, in doses of from one to two grains, for a year, in several cases of cancer of the skin and mammary glands; and, under the influence of this medicine, the disease appeared to me to advance more slowly than usual, and to be attended with less severe pain. I have tried the carbonate of iron in doses of half a drachm, a drachm, and even several drachms, for months together, without perceiving any good effect from the action of the medicine. Several experiments have been made with iodine; and, as usual, with the effect of arousing hopes at first, which have not been subsequently realized. Rust assures us that he has succeeded in curing radically, several cancerous affections of the lips, with the decoction of Zittmann;<sup>1</sup> were not these presumed *cancers*, syphilitic in their nature? Græfe<sup>2</sup> has given a case of very extensive cancer of the face and palate, which was much improved by creosote. We should, therefore, feel encouraged to enter upon new, and even bold attempts, to check a disease, which it is difficult to conceive, must necessarily and under all circumstances, remain incurable; the more especially when we remark the extraordinary success that has attended the introduction of several powerful medicines, in the treatment of certain syphilitic ulcers, the havoc committed by which is neither less extensive, nor their consequences less deplorable, than those of cancer. When called to give our assistance to the aged, however, and to those whose constitutions, although, perhaps, not seriously affected by the disease, have been injured by severe abstinence, by long courses of active medicines, or the shock, and after consequences, of a surgical operation, it is always well to bear in mind the following passage of Celsus, which has been often quoted, both by physicians and surgeons of ripe experience: “Quidam usi sunt medicamentis urentibus: quidam ferro adusserunt: quidam scalpello exciderunt; neque ulli unquam medicina proficit—excisa (carcinomata) etiam post inductam cicatricem tamen reverterunt, et causam mortis attulerunt—sed imponendo tantum lenia medicamenta, quæ quasi blandiantur, quominus ad ultimam senectutem perveniant, non prohibentur.” (Celsus. De Medicinâ, lib. v. sect. xviii.)

#### Historical Notices and particular Cases.

771. Hippocrates nowhere mentions cancer of the skin distinctly. Celsus<sup>3</sup> has left a most accurate account of the external characters of the disease. He has remarked on the great tendency of *καρκίνωμα* to relapse, after it has been extirpated by caustic or the knife. Paul of

<sup>1</sup> A comp. decoct. of sarsaparilla.—Tr.

<sup>2</sup> *Litré*. Art. Cancer: Dict. de Médecine, 8vo. Ed.

<sup>3</sup> Celsus. De medicinâ, lib. v. De carcinomate. “Id vitium fit maximè in superioribus partibus, circa faciem, nares, aures, labra, mammas feminarum—circa locum aliqua quasi puncta sentiuntur—circa eum inflatæ venæ—interdum simili his est quæ vocant *κνιδώματα*, aspredine quâdam et magnitudine suâ.” Celsus has also spoken particularly of the characters and treatment of cancer of the penis (lib. vi. sect. xviii. 3.) and the case he had in his eye, from one of the appearances he mentions, (incipit a nigritiæ,) would seem to have belonged to the *melanic* variety.



Ægina, in giving the characters of cancer, insists particularly upon two symptoms—"ægros maxime fatigans et perpetuo fere dolore affligens." Hafsenreffer<sup>1</sup> has given a good description of the cutaneous cancerous tubercle, and cancerous ulcer. Forestus,<sup>2</sup> under the title of *noli me tangere*, has detailed the symptoms of a tumour, probably cancerous in its nature, situated on the right cheek, and extending to the eye and nasal fossæ. According to Ledran<sup>3</sup> this title properly belongs to phagedænic cancers, regarded as incurable. I have already had occasion to state that lupus had been described under the same name. Paré<sup>4</sup> speaks of a plump hussy of goodly presence (*une garce potelée de bonne apparence*), who simulated cancer of the skin by dabbing her breast with a sponge dipped in a mixture of milk and blood.

Several varieties of cancer have of late been described in our medical journals, and systems of surgery, with great accuracy. A number of cases of cancer of the face,<sup>5</sup> of *fungiform* cancer of the skin, covering the calf of the leg,<sup>6</sup> groin, and forearm;<sup>7</sup> of cancer vulgaris of the scrotum;<sup>8</sup> of *melanic* cancer of the lips,<sup>9</sup> hands, finger,<sup>10</sup> face, &c.;<sup>11</sup> and of *globular* cancer,<sup>12</sup> will all be read with interest. *Chimney-sweepers'* cancer has only been observed and described in England.<sup>13</sup> I have myself given the first account of the *leucoid*, of the *mollusciform* and *disseminated encephaloid forms* of cancer.

772. The local treatment of cancer has been a subject of much research. The effects and advantages of *compression*, which was so much recommended by Dr. Young,<sup>14</sup> have been studied with great care by Dr. Recamier.<sup>15</sup> Some practitioners of great eminence, with Dr. Al. Monro<sup>16</sup> at their head, condemn *excision* entirely. Others, and especially Hill,<sup>17</sup> on the contrary, rely on this means as one very often successful; others, again, among whom Boyer deserves to be particularly mentioned, without rejecting an operation entirely, acknowledge the frequency of relapses, even in those cases which were, to all outward appearance, the most favourable for its performance. In another work<sup>18</sup> I have given an account of the greater number of the experiments which have been made with arsenic, administered internally and applied externally, in the treatment of cancer.

Several medicines—hemlock,<sup>19</sup> belladonna,<sup>20</sup> carbonate of iron,<sup>21</sup> iodine,<sup>22</sup> &c., have been held up as calculated to subdue the cancerous diathesis, and to cure cancer. The whole of these remedies, as well as the *cura famis*,<sup>23</sup> which has been advised with similar views, I have tried a very considerable number of times, but always with results very little satisfactory.

It were greatly to be wished that further experiments were undertaken under definite and well-determined circumstances, and that the results of these were faithfully detailed.

<sup>1</sup> Hafsenreffer. *Παράδοξον ἀνολδθερισμον*, lib. ii. cap. 7.

<sup>2</sup> Forest. *Obs. chirurg.*, lib. ii. obs. ix.

<sup>3</sup> Mém. sur le cancer; sect. des cancers de la peau. (*Mém. de l'Acad. roy. de chirurg.*, t. iii. p. 3.)

<sup>4</sup> Paré. *Œuvres in-fol.*, p. 1051 (l'imposture d'une béliresse feignant avoir un chancre en la mamelle.)

<sup>5</sup> Scarpa. *Opuscoli di chirurgia*, etc., vol. i. Pavia, 1825 (*Mémoire sur le squirre et le cancer*). Extrait par Ollivier (d'Angers) de *Archives génér. de méd.*, t. xi. p. 276.

<sup>6</sup> Sabatier. *Journ. Hebd.*, t. v. p. 321.

<sup>7</sup> Dubourg. *Journ. Hebdomad.*, 2e série, t. ii. p. 363.

<sup>8</sup> Lisfranc. *Archiv. génér. de méd.*, t. xii. p. 521.

<sup>9</sup> Alibert. *Nosol. méth.*, t. i. (Observations de Jurine.)

<sup>10</sup> Jadelot. *Journ. Hebd.*, t. iii. p. 459.—Craveilhier. *Anat. Pathol. in-fol.*, 19e livraison.—Dubourg. *Journ. Hebd.*, t. vii. p. 73.

<sup>11</sup> Dupuytren. *Rev. méd.*, mars 1829, p. 353.—Lisfranc. *Rev. méd.*, t. ix. p. 189.

<sup>12</sup> Alibert. *Nosologie naturelle*, art. Cancer.

<sup>13</sup> Pott's Works, vol. iii.—Simmons. Cases and Obs. on Lithotomy, in which are added obs. on chimney sweepers' cancer, in 8vo. Manchester, 1808. Earle. *Medic. Chirurg. Transact.*, vol. xii. p. 297.

<sup>14</sup> S. Young. Inquiry into the nature of cancer, 8vo. London, 1805.

<sup>15</sup> Recamier. *Recherches sur le traitement du cancer*, 2 vol. 8vo. Paris, 1829. (*Etude de la compression, de la cura famis, de l'action du nitrate acide de mercure et de quelques autres caustiques*).

<sup>16</sup> Monro (Alex.). *Edinb. Medic. Essays*, vol. ii.

<sup>17</sup> Hill. *Edinb. Med. and Surgic. Journ.*, vol. vi.

<sup>18</sup> Diction. de méd. et de chirurg. prat., art. Arsenic, t. iii. p. 374, et suiv.

<sup>19</sup> Stork (A.). *Libellus quo demonstratur cicutam*, etc. Viennæ, 1760, 8vo. *Libellus ii.* (praises the remedy). J. Andree. *Obs. upon a treatise on the virtues of hemlock*, in cases of cancers, etc., 8vo. London, 1761, gives negative results.

<sup>20</sup> Lamberger. *Lectio inaug. sistens ephemeridem persanati carcinomatis*, 4to. Groningæ, 1754.

<sup>21</sup> Carmichael. *Essay on the effects of carbonate and other preparations of iron upon cancers*, etc., 2d edit. 8vo. Dublin, 1809.

<sup>22</sup> Magendie. *Formulaire*, sixième édit., 8vo. 1827. Art. Iode.

<sup>23</sup> Pouteau. *Œuvres posthumes*, t. i. Tisserot Prix de l'Acad. de chirurgie.

CASE CXXXIV.—*Cancerous tubercle of the lower lip. Removal and cure.* Anne Blasie, sixty-eight years of age, became a patient in the Hôtel Dieu, Feb. 14, 1826, on account of a cancerous affection of the lips. The disease had appeared eleven months previously, as a small tubercle, on the inner surface of the lower lip. This tumour, by and by, became covered with a scab, which the patient removed by working at it with the point of her tongue. The patient leads a very active life, going to bed soon, and rising very early in the morning. She had had herself bled a few days ago, and since then, thinks that the tumour of the lip has been less inflamed, and not so hard as before. The tubercle, at the date of her admission, is as large as an almond, hard and ulcerated on its upper part along the edge of the lip, the mucous membrane of which is destroyed in two different places. Usually indolent, this tubercle is at times the seat of acute shooting pains, similar to what are caused by the slight prick of a needle.

M. Sanson, surgeon of the Hôtel-Dieu, removed the tubercle with a single stroke of the flat curved scissors. The semi-lunar wound that resulted, healed rapidly, so that the patient was dismissed on the 4th of March, perfectly well, the lip presenting no deformity.

CASE CXXXV.—*Cancerous tubercle—ulceration—complications—death.* Madame \* \* \*, sixty years of age, consulted me towards the end of the year 1824, on account of a chronic laryngo-tracheitic affection, attended with loss of voice. Asses' milk, and a soothing plan of treatment, were recommended; and she afterwards went into the country to try the effects of the method in restoring her voice.

About the 15th of June of the year following (1825), she perceived a small tubercle, or wart, as she called it, on the prominent edge of the root of the nose. Another practitioner attempted to get rid of this wart by passing a ligature round its base on the 1st of July. This was not done without much difficulty, on account of the flat lenticular shape of the tubercle, which was of the same colour as the skin, with a black point in its centre, and nowise painful. The ligature at first caused little inconvenience, but at length, before the tubercle fell off, which happened on the 13th, great suffering. A sore, a little larger than a silver threepenny piece, surrounded by a great deal of inflammation, was left.

On the 16th of July the patient returned to Paris, when I saw her again. At this time there was on the median line of the root of the nose, an ulcer half an inch in breadth, rounded and prominent, and presenting a singular mixture of whitish, livid, and blackish points, upon its surface; this sore did not discharge, and formed the centre of an inflammatory circle, which spread to the lateral parts of the root of the nose. The appearance of this ulcer reminded me of that presented by fungoid cancers, and I proposed calling M. Dupuytren into consultation. This eminent surgeon could hardly be persuaded that the sore we had before us could have been developed in a month. It was agreed to cover the swollen parts with emollient and anodyne cataplasms, and to apply five leeches every day to the base of the sore, causing the bites to bleed as plentifully as possible, by the use of tepid fomentations. Forty leeches were in this way successively applied to the base of the tumour in the course of eight days; but no sensible abatement of the inflammation resulted. In consultation, a week afterwards, it was determined that nothing was to be expected from the antiphlogistic treatment: the swelling had rather increased than otherwise under it; and, reflecting that the progress of cancerous sores is seldom so rapid as in this instance, and conceiving it possible that the obstinacy of the laryngeal affection, which still continued, might be owing to something *specific*, Madame \* \* \* was put upon a course of the bichloride of mercury in solution, and decoction of sarsaparilla. These medicines, continued for two months, produced no good effect; on the contrary, the ulcerated tumour was more rounded and prominent than before, chapped in several places, and scarcely secreted any thing. The general health of the patient, too, seemed to have suffered. She therefore returned to a tranquil mode of life, took asses' milk, &c.; and I covered the ulcer with a little powder, composed of ninety-nine parts of calomel and one of protoxide of arsenic. This application produced the most singular abatement in the inflammation of the base of the tumour, and removed the disagreeable smell emitted by the sore. An operation being held inadmissible by the eminent surgeon consulted, and the patient herself having an unconquerable aversion to any thing of the kind, I resolved



on destroying the indolent fungus that rose from the surface of the ulcer, by means of the concentrated nitric acid. The patient felt no pain from the action of the acid, either at the time of the application or afterwards, so that on the following day I used the acid again, and more freely than at first. Neither did the patient, on this occasion, make any complaint at the time of using the acid; but next day, she felt some deep pricking pains under the small tumour. Five days afterwards, (Sept. 28,) a portion of the tumour, like the half of a large walnut, sloughed out, and the surface of the sore was reduced to a level with its edges. By and by, recourse was again had to the compound powder of calomel and oxide of arsenic, with which the surface of the sore was dusted over; and under this application, the neighbouring parts became much less inflamed, and the ulcer itself contracted, and even cicatrized over three-quarters of its whole extent. But while the cancerous sore improved, the chronic inflammation of the larynx and trachea extended to the bronchi, and even appeared in others of the mucous membranes; so that the patient, long confined to spare diet, lost her strength rapidly, and died on the 5th of April, 1826.

CASE CXXXVI.—*Mollusciform cancer. Cancerous formations in various parts of the body.* M. S. Duboille, aged forty-two, married, and a mother, had felt her health on the wane for the last three years and a half, having suffered from wandering pains of the abdomen, and the sensation of something like a tumour in the lower part of the left hypogastrium, a situation in which she felt rather severe lancinating pains from time to time. The right breast had begun to enlarge about a year ago, and was now hard, shrunk, and knotty, with a chain of enlarged lymphatic glands stretching from it, though it had never been very painful towards the axilla. In January, 1827, a number of tubercles made their appearance on different regions of the body, two of which soon became much larger than the rest, the one situated midway between the ribs and haunch bone of the right side; the other on the right scapular region. Many of the tubercles had precisely the appearance which is held characteristic of the non-contagious form of molluscum. The patient's skin was of a uniform pale straw colour. The belly was large, and the seat of deep lancinating pains. The evening after her entrance into the Hôpital de la Charité, the patient had a violent attack of bleeding from the nose, which was only stopped by plugging the nostrils. The patient having taken out the plugs, the hemorrhage returned next day, and the apparatus had to be replaced, while a small quantity of blood was taken away from the arm. The patient died a few days afterwards.

On inspecting the body of this woman, thirty-six hours after her death, the skin of the thorax was found beset by about ten small tubercles, scarcely rising above the general level, of a bluish cast in some instances, in others, of the same colour as the surrounding integuments; the smaller of these tubercles did not extend deeper than the skin, so that the inner or adhering surface of this tissue presented its ordinary appearance; opposite the larger tubercles, however, the texture of the skin was altered, indurated, and yellowish. The left mammary gland was healthy. On the posterior surface of the thorax, two tumours, of much larger size than any that have been mentioned, were observed. These were prominent, uneven, fungiform, and when cut into presented the following dispositions: The most external layer was yellowish, and in its general characters, approached the organic alteration which has been described under the name of scirrhus; the next layer consisted of the corion hypertrophied, but not otherwise changed. The skin of the abdomen, held between the eye and the light, showed a number of small reddish or livid tubercles, nowhere prominent; and the integument of the left arm presented two tubercles, of the same colour as the skin. These morbid changes in their first stage, and as they occurred in the smaller tubercles, appeared to consist of circumscribed simple hypertrophied patches of the corion; in the larger tumour, however, the more superficial layers of the corion presented an uniform yellowish tint, and a semi-transparency analogous to what is observed in scirrhus.

The right breast was hardly larger than that of the opposite side, but it was very hard, yellowish, and creaked under the scalpel, like a scirrhous mass. The colour here formed a striking contrast with the milky white of the left mammary gland. Running from the breast to the hollow of the axilla, there was a chain of lymphatic glands, reddish in colour, and rather voluminous, but not otherwise altered.

In the abdomen, the stomach exhibited a very remarkable morbid appearance. Its inner surface presented a great number of nipple-like eminences, analogous to the tubercles of the skin; they were in general of the size of a hazelnut, and, when cut across, showed that they consisted of four layers: the mucous coat, very much hypertrophied externally, the sub-mucous cellular tissue indurated, the muscular coat hypertrophied, and redder than natural, and the peritoneum, which was not sensibly changed. Three or four of these tubercles were ulcerated in their centre. The intestinal canal was healthy. The pancreas and liver were greasy. The spleen was hard, and in one part presented a mass either of cerebriform matter, or of discoloured fibrinous deposit. The left ovary, the size of a turkey's egg, consisted in part of cerebriform matter, and in part of a serous cyst. No other morbid alterations sufficiently remarkable to enumerate, were detected.

CASE CXXXVII.—*Leucoid cancer. Cutaneous tubercles. Cancerous alterations in a female aged seventeen.* Marie Patureux, sempstress, aged seventeen, of lymphatic temperament, had menstruated regularly for six months, when in the month of February, 1828, she began to feel lancinating pains in one of her thighs, and became aware of a tumour in this situation, nearly as large as a walnut. The application of twenty leeches relieved the pain for a time, but the tumour went on increasing in size; the thigh swelled, walking became laborious, and the patient entered the Hôpital de la Charité, where, besides the tumour on the thigh, another, occupying the umbilical region, was discovered. Rest was prescribed; a soap plaster, and, by and by, the inunction of some mercurial ointment, combined with the methodic compression of the femoral tumour, were tried. After remaining in the hospital a month, a number of small tumours, which I shall describe by and by, began to make their appearance on different parts of the body. She then left the house; but on the 14th September, became a patient in the Hôpital St. Antoine. The number of tumours had now very much increased; and, although three of these had acquired a considerable size before the patient became aware of their existence, to show us the mode in which they were generally evolved, she directed our attention to a number of small round bodies, about the size of large pins' heads, imbedded in the skin of the belly and thighs; these were not made visible by any projection above the level of the surface; they were quite immovable, and not painful to pressure. As the tubercles advanced, however, they rose above the general level, and, assuming an oval shape, very commonly appeared surrounded with a large pale red areola. They were then mostly of the size of a shilling, or rather larger. Here and there several appeared irregularly clustered together. The greater number were pink in the centre, and of a dull white in the circumference. Those of oldest formation, however, presented a brownish hue in the middle, which, instead of being raised, was flattened, and even depressed. The brown tint seemed to inhere in the cuticle, which could be detached in small plates from several of the tubercles. Lastly, the majority of the tubercles were traversed by a number (commonly four or five) of small tortuous venous branches, which, in case the tumour were prominent, proceeded from the base, to unite in the centre, and which, in case it were flat, were distributed almost solely around its circumference.

The tubercles were not accompanied with any pain: the surface of the right thigh was completely covered with them. They were also very numerous above the pubes; an irregular band of them stretched from the right inguinal region to the anterior and superior spinous process of the left os ilium. The skin of the abdomen generally, and of the bosom, was also thickly beset. Besides the cutaneous tubercles, a large tumour could be felt deeply imbedded in the substance of the right thigh, which was much swelled, and nearly a third more in circumference than that of the opposite side. On the right arm there was another morbid growth, of a rounded form, an inch and a half in diameter, and pointed in its centre, which fluctuated, and was of a livid red, slightly squamous, and occasionally moistened with a little exudation. The abdomen, in fine, was hard and tense, and seemed distended under the navel by a bulky tumour. The patient scouted every hint at the possibility of this last tumour being induced by pregnancy, so obstinately, that we were at first misled in our estimate of its nature, when we presumed it might



be similar to the others. By and by, however, the truth came out: the girl was pregnant, and the mistake committed might have been avoided by a recurrence to auscultation.

The patient's general health was at first satisfactory; but she soon began to droop and lose flesh. The cancerous nature of the complaint under which she laboured being recognized, made us fear for the worst. Arsenical medicines were tried for some short time, but these appearing to cause heat in the throat, and pain in the bowels, were soon discontinued, and leeches applied to relieve these symptoms. The patient became jaundiced at length, and was sinking fast, when, on the 11th of January, 1829, she was taken in labour, and died almost immediately after giving birth to a child, which lived but a few hours.

Inspected twenty-four hours after death, the body of the patient presented the jaundiced colour observed during life. The cutaneous tubercles, when cut into, appeared, in many cases, to be formed of the corion hypertrophied, the prolongations of this structure into the subjacent cellular membrane being much more largely developed than they are in the normal state. Some of the tubercles presented large drops of blood effused into the substance of the corion; others again were softened, and when squeezed between the fingers, a little purulent matter exuded from the cut surfaces. The tumour of the right arm consisted of a mass of cerebriform matter, softened, and tinged yellow like the skin. The subcutaneous cellular substance, which was very abundant, formed small white, hard and rounded masses, which creaked when cut into, under the several tubercles. The deep-seated tumour of the right thigh was composed of cerebriform matter, but very hard. The centre of the mass, as large as the fist, was traversed by the crural veins. Several small, hard, cancerous masses were detected in the upper part of the intestinal canal. The mesenteric glands had also evidently undergone alteration. The liver was healthy. The ductus cysticus and ductus choledochus were alike distended with bile; the latter was compressed by the extremity of the pancreas in a scirrhus condition, and this had caused the jaundice. The aorta was surrounded by a cerebriform mass of considerable size. The other viscera did not appear to be changed. The fetus, apparently in the seventh or eighth month of its uterine existence, was quite free of all appearance of cancerous affection.

CASE CXXXVIII.—*Encephaloid cancer of the scalp and pubic region; death.* Tyron, aged twenty-five, the mother of several children, observed in the month of April, 1826, that a small tumour, the size of a mulberry, had grown on her head, having been preceded for several weeks by constant and pretty severe pain in the parietes of the cranium. Towards the month of August this woman consulted M. Ollivier d'Angers, who discovered four mammillated tumours of a like description on the scalp, one of which was extirpated; but scarcely had the edges of the wound coalesced, when a new tumour sprang up, and speedily attained the size of a hazelnut. This tumour was uncovered with hair, of a pale-red colour, slightly flattened, hard and resisting, and the seat of acute intermitting pain. The other tumours were rather smaller, of a violet-red colour, hard, and also without any covering of hair; the skin that was stretched over them was of a pallid or bluish-white colour. The tumours only became painful when they had acquired a certain size. Two more of the tumours were subsequently removed by M. Boyer, one of which was rapidly reproduced, and, at the time I saw the patient first, bore the most perfect resemblance to a raspberry. At this period the patient appeared to be labouring under a purely local affection. The principal functions were performed with perfect regularity, and Tyron had all the appearance of a person in good health.

The indifferent success that had attended the two operations already performed, the repugnance of the patient to any further measure of the kind, and the obscure nature of the disease, led to the prescription of bleeding, and the use of simple emollients. Two of the tumours of the scalp became red and fungous, and a tumour of the same kind was evolved above the pubes. Symptoms of morbid alterations in the abdomen soon afterwards made their appearance. In the hypogastric region, a tumour, equal to the mass of the uterus in the fourth month of pregnancy, was discovered. There was no change in the state of the cervix uteri, however, to cause any suspicions of pregnancy; besides, the catamenia continued regular, though

scanty. This tumour was the seat of violent pain, and the patient became feverish and disturbed in her sleep. On the 8th of January all the symptoms of acute peritonitis were presented; the patient was bled, put on low diet, ordered to have diluents, lavements, &c., but in vain; she died on the 22d of January, 1827.

The body was inspected by M. Ollivier, who communicated the appearances to me, and sent for my more particular examination the tumours of the scalp. Three of these were completely subcutaneous, and as large as musket balls. The skin which covered them was naked, the hair bulbs having probably been atrophied under the effects of the compression they had undergone. The cellular substance surrounding these tumours was healthy. When dissected out, their surface was lobulated, which made them look as if they consisted of a number of smaller parts. When cut into, they were found composed of cerebriform matter, in a state of crudity. Other two fungous and vascular-looking tumours, which were not covered with integument, were also formed of encephaloid matter, but very much injected and softened. The bone under these last tumours was healthy. Among the hair of the pubes, a small red bleeding tumour, the size of a nut, also formed of encephaloid matter, was discovered. On either side of the umbilicus, a tumour of the same size and like composition, but less vascular, was found. The peritoneum, in a state of inflammation, contained about a pound and a half of a sero-purulent fluid. The lower or lesser pelvis was filled by a lobulated tumour, uneven on its surface, of a pale rose-colour, and as large as a child's head, lying between the uterus and rectum, which were respectively pushed by it forwards and backwards. When cut into, this tumour presented all the characters of the encephaloid tissue; several of the lobuli were softened, others were still in a state of crudity; every part of it had the same smell as the substance of the brain. The centre of the tumour appeared to be occupied by the left ovary; the broad ligament of the same part formed a very distinct band on the external surface of the tumour. Around this ovary, the morbid formation was clustered in the shape of lobular masses, most of which were of the size of hens' eggs. A lobulated encephaloid mass, as large as a hen's egg, was also found in the thorax, adhering to the right lung, which presented a peculiar structure: instead of being cleft transversely, as usual, it appeared divided longitudinally by a deep fissure. The head and spinal canal were not examined.

773. Having felt called upon in the course of this work to describe subcutaneous tubercles of a *syphilitic* and of a *scrofulous* nature, I conceive it will be well to quote a case of *painful subcutaneous tubercle*.<sup>1</sup>

CASE CXXXIX.—*Painful subcutaneous tubercle.* M. J. Roy or Fuque, aged forty-two, became a patient in the Hôpital de Cochin, 1st Oct., 1826, on account of the disease which Mr. W. Wood has denominated *painful subcutaneous tubercle*. The tumour in this case was situated in the posterior part of the thigh, was as large as a grape stone or a small pea, of an oval form, nowise adherent to the skin, and not only extremely painful when touched or pressed upon, but repeatedly during the course of the day, the seat of severe pain, which shot downwards from the thigh into the leg. The patient informed me that she had suffered for some time with severe darting pains in the seat of the tumour, before she discovered a small hard body, about the size of a large pin's head. It continued nearly stationary for several years, and attended with the same symptoms; it had finally grown gradually till it had attained the dimensions stated, accompanied with paroxysms of pain, more and more frequent, and more and more severe. The patient has now from two to fifteen paroxysms daily, which last from a quarter of an hour to an hour, often with such intensity, that tears are forced from the patient, though she appears to possess a great share of fortitude and much good sense. These paroxysms, which frequently came on spontaneously, were certainly excited by the slightest touch, so that the patient is very careful how she either lies or sits down, and now submits to the examinations of medical men with great reluctance, as she never fails to suffer severely from their manipulations. Each paroxysm begins with tingling and severe shootings, and with a feeling of extreme heat in the tubercle and skin which covers it. An instant afterwards the pain extends down the whole of the back part

<sup>1</sup> For a particular account of these tubercles, vide Descot. Diss. sur les affections locales des Nerfs, 8vo. Paris, 1825.



of the limb, from the tubercle to the heel, ending between the malleolus internus and the inner and under edge of the os calcis, without any diminution of intensity, through the whole of this course; if there were any difference, indeed, it was rather in the greater severity of the pain in the tubercle itself, the calf of the leg, and the inner side of the heel. The sole of the foot, and all the parts above the tubercle, have always been exempt from pain. In its extension, the pain did not seem to follow the course of any particular nerve; it was general, and diffused over the posterior part of the limb. The anterior aspect of the thigh and leg was unaffected. Active exercise always made the paroxysms more severe. These were also more than commonly acute on the approach of the menstrual period, and when any great change occurred in the state of the atmosphere, especially when it became cold and moist. During the paroxysm, the pain was almost constantly of the shooting kind, or appeared to extend in rapid pulses from the tubercle to the heel. When the paroxysms were long and severe, the feeling of heat was not confined to the tubercle, but extended to the whole of the back part of the thigh; although unaccompanied with febrile symptoms, they always left the patient exhausted and enfeebled. Various remedies had been tried, but without doing any good.

M. Guerbôis extirpated the tumour next day, October 2d, exposing it by a longitudinal incision, raising it by means of a hook, and taking it away along with a small portion of lamellar tissue, by which it was surrounded. The wound scarcely bled, and its edges, being brought together with sticking-plaster, united by the first intention. From the moment of the operation no further paroxysm of pain was felt, and by the 6th of the month, the patient felt completely relieved from the torture she had endured for eight years.

On the day of the operation, M. Ollivier (d'Angers) and I examined the tumour particularly. It was of an oval form, of the weight of six grains, smooth, and of a very slightly bluish-white cast of colour, very similar to that of made starch, without any thing of the pearly lustre of cartilage. The texture of the tumour was hard and solid, like that of the fibro-cartilages, from which it differed, however, in being homogeneous, in presenting no trace of fibres in any part; neither could any vessel or nerve be detected in its composition, even with the assistance of the magnifier. The cellular substance in which the tumour was enveloped, was also searched in vain for even the smallest branch of an artery or nerve. The tumour was not developed in the course of any nervous twig; neither can it well be imagined that it lay in the neighbourhood of one of the posterior subcutaneous branches of the sciatic nerve, to the compression of which all the suffering endured by the patient might be attributed; for the intermitting, extremely acute and lancinating character of the pain, could not be explained by this supposition. Looking at the bluish cast of the tumour, and all the circumstances attending its development, we were inclined to view it as a modification of scirrhus, rather than as simply cartilaginous.

#### ELEPHANTIASIS. (a)

Vocab. *Elephantiasis, Djuzam, Lepra Medii ævi, Lepra Taurica, Mal rouge de Cayenne.*

774. Elephantiasis is a serious chronic disease, characterized externally by shining and oily-looking dark patches, to which succeed irregular, slightly prominent, softish, and at first, red and livid tubercles, which by and by assume a dusky or bronze colour; these usually continue long indolent; they may terminate in resolution or ulceration; their most common seat is the face. They also often appear on the palatine arch; but the nose and ears, swelled and hideously distorted, are the parts of all others which suffer most frequently.

775. *Symptoms.*—Some writers inform us that Greek elephantiasis

(a) It will be seen that M. Rayer restricts this term to the disease known as leprosy, the Greek leprosy of the middle ages. By many writers it is applied to the other form of leprosy, or the Arabian, the prominent or chief feature of which is a swelled leg, (*Barbadoes leg*). This disease is described in a subsequent part of this volume at § 1331 *et seq.*

is usually preceded by a state of languor and depression both physical and moral. Robinson mentions this particularly as one of the most remarkable symptoms of the first period of the disease. The *spots* and *tubercles* which characterize the disease, when fairly formed, occasionally appear upon the skin, with acute febrile symptoms of some intensity—(development by *fluxion*, Th. Heberden). But the attack of the disease is more commonly gradual and slow (development by congestion, Th. Heberden). The evolution of the tubercles is sometimes preceded by a change of colour in the integuments, which in whites become sallow, bronzed, or of a hue which might be likened to that of the mulatto. In blacks, the *spots* are even deeper coloured than the skin; in whites they are yellowish or reddish, and slightly raised above the general level of the surface. Irregularly disseminated, like the patches of psoriasis *guttata*, the spots of elephantiasis look as if they were full of oil (Adams), or covered with varnish. Occasionally they are quite *insensible*; but more frequently, feeling is not quite absent in them, though they may still be compressed without pain. In the very first stage of their formation, they are now and then observed to be endowed with a greater degree of sensibility than the skin which surrounds them: by degrees this state, and the redness which has accompanied it, subside; the flush being followed by a tan or bronze colour; in every case, after having continued stationary during a period, the duration of which varies considerably, the spots are succeeded by tubercles, some of which are truly cutaneous, whilst others are evidently developed in the cellular membrane which lies under the skin.

The cutaneous tubercles of elephantiasis are small, soft, round, reddish, or livid tumours, the size of which varies between that of a pea, and that of an olive. They generally appear on every part of the face, on the nose and ears particularly, but are also, occasionally, though rarely, evolved on the legs only. When patients live under this infliction for a few years, the disease very commonly spreads to the whole body. The disease becomes even more and more marked. Of all the parts which are implicated, the face always bears the strongest traces of the havoc and deformity that characterize it. This seems to be generally puffed. The skin of the forehead, marked by numbers of deep transverse furrows, is beset with many tubercles, the superciliary ridges, swelled, and furrowed with oblique lines, are covered with nipple-like projections. The hair of the scalp, that of the eyebrows, and the cilia, are lost. The lips become thick and shining; the chin and concha of the ear enlarge, and become thickly covered with livid tumours; the lobe and alæ of the nose are in general even more seriously altered than the other parts of the face; the nostrils are irregularly dilated; lastly, the cheeks are swollen, and the whole of the features, enlarged and distorted by the puffing of the subcutaneous cellular membrane, acquire a character of the most frightful deformity. Arrived at this stage, elephantiasis sometimes remains stationary; and then the skin alone seems implicated; the principal functions are performed with perfect regularity.

The time which elapses between the appearance of the first tubercles and the development of those which succeed them, varies extremely; in general, however, they are rapidly evolved; they never acquire a very large size. At a subsequent period, commonly after several years, the greater number of these tubercles inflame, and are either resolved or suppurate. Ulceration is preceded by an acute inflammatory state, during which the tubercles, and the integuments surrounding them, become hot and red. The sanious pus of the tubercles which become softened, dries up speedily, and forms adhering, brown or blackish scabs, which rarely rise above the level of the skin. Sound cicatrices are occasionally formed under these scabs; but this termination is extremely rare.

776. When Greek elephantiasis appears before the age of puberty, the development of the beard, and of the hair upon the genital organs and axillæ, is often checked. In some patients the axillæ and pubes are covered as usual with hair, but the beard is wanting, or a few straggling hairs appear upon the throat in situations where no tubercles are evolved. In adults, the beard, and axillary and pubic coverings, and occasionally, but more rarely, that of the scalp, have also been observed to be lost. I have already said that the sensibility of the skin might be blunted or increased; sometimes it is not at all changed.

777. On the upper extremities the tubercles follow the same course



in their evolution: less numerous in general than on the face, they appear more particularly on the outer and posterior aspects of the forearms. The hand is almost always swollen, but is rarely the seat of tubercles; it is commonly of a livid tint, with less of the bronze cast than the other parts of the body. The same phenomena are observed to take place in reference to the lower extremities and feet. The space in the sole, included between the heel and heads of the metatarsal bones, filled with swollen cellular membrane, causes the foot to appear quite flat. The tubercles of the buttocks are rather large; those of the sole are flattened. Ulceration of the tubercles of the legs is always slow of healing; the phalanges are occasionally stricken with sphacelus, especially when the disease, complicated with important lesions of internal organs, is tending to a fatal termination. The trunk of the body is seldom affected with tubercles.

778. The mucous membrane of the mouth, the velum palati, uvula, amygdalæ, pharynx, and nasal fossæ, very commonly also present tubercles, but less voluminous than those of the skin; a longitudinal band of tubercles is frequently seen extending from the superior incisor teeth backwards along the roof of the mouth to the uvula. The lingual veins are occasionally observed to be varicose. An inflamed state of the pituitary membrane gives rise to the secretion of a sero-purulent fluid from the nostrils, to pain of the frontal sinuses, and finally to caries of the cartilages and turbinated bones of the nose. The voice becomes hoarse, nasal, and then is lost. The affections of the organ of hearing in elephantiasis do not extend beyond the external auricle. This part is enlarged, deformed, of a livid colour, and commonly beset with tubercles. The sense of smell, almost uniformly deranged even from the commencement of the disease, is always destroyed entirely when it has attained a certain stage; that is to say, when the pituitary membrane, covered with tubercles, ulcerates, and pours out a profusion of fetid secretion. The eyes, except the deformity caused by the loss of the cilia, are seldom affected either externally or internally. Although the arch of the palate and the lining membrane of the mouth are frequently thickly beset with small tubercles, developed in the mucous follicles of this tissue, the sense of taste generally remains intact. The pharynx at length, is usually covered with tubercles, but the œsophagus is seldom thus affected. When the patient has not been put upon a lengthened course of purgatives or arsenical preparations, the stomach and intestines commonly perform their functions satisfactorily. Yet in the bodies of those who have died while labouring under Greek elephantiasis, the follicles of Peyer have been found very much developed, as well as intestinal tubercles ulcerated, or on the point of becoming so, small cicatrices, and enlarged or tubercular mesenteric glands (Larrey). The liver and spleen have not been observed to be morbidly affected. In accordance with the affection of the voice during life, a thickened state of the mucous folds of the larynx, tubercles upon the chordæ vocales, and occasionally ulcers which had destroyed the thyro-arytenoid ligaments, have been discovered after death. Neither is it uncommon to observe small ulcers of the mucous membrane of the trachea. The lungs have generally some crude or softened tubercles scattered through their substance. Three patients affected with elephantiasis, whose bodies I have examined, after their demise, presented this alteration of the lungs. Others, who have died at a less advanced stage of the disease, have shown unequivocal traces of pneumonia. The organs of circulation and of innervation present nothing peculiar, so long as the disease continues limited to the skin.

Authors are not agreed in regard to the influence of Greek elephantiasis on the organs of generation. According to some, the disease always arrests the evolution of these organs when it occurs before puberty; and when the attack occurs after this period, it causes them to fall into a state of atrophy (Adams). Pallas also informs us that the Tartars affected with elephantiasis show a distaste to sexual intercourse. All the patients I have had an opportunity of seeing myself, however, had the genital organs very well developed. On the other hand, none of them were tormented by the *libido inextinguibilis*, mentioned by some writers, particularly by Vidal and Joannis, as a frequent concomitant of elephantiasis. Niebuhr relates that a leper of the Lazaretto of Bagdad, a prey to the venereal appetite, succeeded in communicating his disease to a woman of the town, who was in consequence admitted into the Lazaretto to him. This patient was

perhaps affected with lues venerea and syphilitic tubercles of the skin. (a)

The organs of locomotion are remarkably enfeebled in elephantiasis, although this is not a constant symptom of the disease. If it has begun before puberty, the patient continues weakly and gradually becomes deformed; if, on the other hand, manhood has been attained before its invasion, and the subject be in other respects well constituted, the affection of the muscular system is only observed to come on by slow degrees, and follows the current of the disease. The lesions of the osseous system, described by some authors, and denied by others, are admitted on the strength of the solitary case related in the dissertation of Ruette. To sum up, Greek elephantiasis appears to affect especially the skin, the mouth, the nasal fossæ, and the organs of the voice and of respiration.

779. Robinson, who studied elephantiasis at Calcutta, reckons two species of the disease; one, the tubercular, the characters of which I have just detailed (775-778), the other distinguished by the occurrence of broad tawny patches, of considerable extent, shriveled or wrinkled on the surface, *insensible*, attended with slight desquamation of the cuticle, and a peculiar deformity of the hands and the feet, and ending in extensive ulceration, which causes a loss of soft parts, greater or less in amount. This is the elephantiasis *anesthesiaca*,<sup>1</sup> the same disease described under the name of *Baras*, by Avicenna, and which has been observed by Winterbottom. Vidal tells us that he has seen individuals labouring under elephantiasis, whose sense of touch was blunted, not only in the extremities, but over almost the whole surface of the body, though they still suffered much from internal pain.<sup>2</sup> (b)

(a) Mr. Peacock, (*Edinb. Med. and Surg. Journ.*, 1840,) in his account of the tubercular form of elephantiasis in the island of Ceylon, coincides with Ainslie, who describes the loss of power and wasting of the testicles as of invariable occurrence in the latter stages of the disease. In some cases these glands could scarcely be detected, and in the case of a young man, then 25 years of age, who had been attacked with the disease before he was 14, the signs of puberty had not developed themselves. Mr. Peacock admits, however, that where the disease has been of much shorter duration the sexual feeling was certainly not impaired.

(b) The symptoms of the more aggravated form of elephantiasis are well described by Mr. Brett (*On the Surgical Diseases of India*). He calls the disease *lepra tuberculata virulenta*.—"An individual labouring under this complaint usually presents himself in the following condition: A general torpor seems to pervade his system, so that his sensations of pleasure and pain are considerably impaired. Instead of that excessive propensity to venery which they are generally supposed to possess, they have usually little or no inclination for such

<sup>1</sup> From a priv. and ἀνίσθησις sento.

<sup>2</sup> On the subject of anesthesia in elephantiasis, the authors who have written on the lepra of the middle ages, must be consulted. The greater number of these recommend the skin to be pricked, to ascertain whether it be sensible or not. Ferrius describes, as the first degree of elephantiasis, the case of a man fifty-one years of age, whose skin was marked with black or livid spots, *sensu nullo aut obtuso præditæ*; and in his general description of the disease, he says of those who are affected: *in his sensus torpescit*. Paré tells us—"Véritablement je me suis souvent trouvé à l'épreuve des ladres, et entre tous les signes dignes d'être bien notés, cestuy-cy m'estoit commun, c'est que les ayant piqué d'une grosse et longue espingle au gros tendon qui s'attache au talon, et voyant qu'ils n'en sentoient rien, bien que j'eusse poussé l'aiguille fort avant, je conclus que véritablement ils sont ladres." (Paré. Œuvres, liv. vii. chap. ii.) More modern writers have also particularly mentioned the diminution of sensibility in the disease denominated elephantiasis. Cleyer notices the symptom in his account of the elephantiasis he observed at Java. According to Schilling, elephantiasis is distinguished by two principal characters: a change in the colour of the parts affected, and insensibility of the skin. Hahn, in speaking of a patient labouring under elephantiasis, whose skin, besides tubercles, was covered with white squamæ, says—"Plena *anæsthesia* est in cute sinistri genu, quæ non tantum, quatenus exstat, sed profundius pungi, inscio ægro, potest." This insensibility, he observes, was especially remarked over the old patches of the disease, which were of a dusky hue, and slightly prominent. Winterbottom divides the elephantiasis which he studied among the negroes on the west coast of Africa, into three species, or rather three degrees:—1st. Demadyang, in which the skin is only discoloured and insensible; 2d. Didyan (Juzam), in which there were ulceration and loss of the phalanges of the fingers and toes, swelling and ulceration of the lips and alæ nasi. 3d. Baras, in which the same symptoms occur, but of greater intensity, with ulcerative destruction of the throat and structures of the nose. Robinson describes a variety of anesthesiac elephantiasis with discoloration of the skin, which he observed in the East Indies, and which Bateman conceives to be the *Baras* of the Arabian writers. Dr. Fuchs has given the details of two cases of elephantiasis *anesthesiaca*.



780. *Anatomical Researches*.—Elephantiasis is a disease which is very seldom seen in Europe, and opportunities of instituting inquiries into the morbid anatomy of the affection occur still more rarely. All the inquiries that have been instituted, however, tend to show that those who are the subjects of the disease, almost always fall victims to acute or chronic inflammatory affections of the organs of voice, of respiration, and of digestion. I shall, by and by, give the history of a case of elephantiasis, with the whole of the very accurate details of the post-mortem appearances. Vidal saw one patient affected with elephantiasis die of a pleurisy; a second succumbed, after having suffered extreme oppression in his breathing, which was preceded by the drying up of his ulcers; a third was carried off by a putrid fever; a woman sank under the sequelæ of her confinement.

781. *Causes*.—First observed in Egypt, then in Italy during the time of Pompey, elephantiasis subsequently extended, and has since been seen in the four quarters of the globe. It spread over the whole of Europe like an epidemic during the middle ages, especially about the period of the Crusades; and at this time, houses destined for the reception, or rather for the confinement of lepers, were established in great numbers.<sup>1</sup> Since the commencement of the 17th century, this

indulgence, though there are exceptions to this, where it exists in a diminished degree only. The pulse is slow, not small, but heavy, 'as moving through mud.' There seems to be a sort of stagnation in the process of nutritive vitality. The bowels are generally constipated. The patient's face is bloated. His forehead, nose, lips, and ears become swollen; his nostrils expand; his eyes appear sunk and fiery, the tone of his voice is altered to a loud and nasal sound; the skin, especially of the extremities, is harsh and scaly, resembling a case of ichthyosis. He is subject to profuse perspirations, especially when exposed to the sun; these are confined to the trunk, not the slightest moisture permeating the surface of the scaly extremities. He is often distressed with thirst and a sensation of internal heat. The knees are stiff, and their motions contracted. The hairs generally fall from the brows, the beard, the pubes, and axillæ, &c., or they are seen stunted and dried up for want of moisture. His breath is fetid, and his perspiration rank and offensive. The blood drawn by venesection is very dark. A kind of dry gangrene pervades the fingers and toes, which are generally eaten away, and drop off at the first phalanges; these sores then generally cicatrize over without any rete mucosum, and the next joint becomes invaded by a renewal of the ulcerative process. It is singular to observe that notwithstanding these extensive sores, they can wear hard shoes, which are seen saturated with the sanious ichor that exudes from these ulcerated surfaces. The disease progressively advances, eating through the ankles and wrists, and performing slow but certain and successive dismemberments, every revolving year bearing some trophy of this tardy but gradual march of death, till at last the vitals become affected. During all this, a sleepy inertness overpowers his mind, and 'seems to benumb and almost annihilate every faculty, as well of the soul as of the body, leaving only sufficient sense and activity to crawl through the routine of existence.' In the last stages of the complaint, the flesh gapes with long sores, the mouth, nose, and brain become exposed to its ravages, and death at length terminates this loathsome existence. He is usually cut off by the supervention of diarrhœa. It is astonishing, however, to witness how long the victim lingers, from twelve to twenty years being no uncommon duration. During the greater part of this period he has a good and even voracious appetite, and moves about from village to village."—*British and Foreign Med. Rev.*, pp. 424-5, vol. xii.

<sup>1</sup> Between the 11th and 16th centuries, an immense number of hospitals for lepers were to be found in every country in Europe. The numbers of these houses, however, have been over-rated, through a false interpretation of a passage of Math. Paris (*Hist. Angl.* ad ann. 1244. Ducange, *Glossaire*, Art. Lazaret). Still they must have been very common in certain provinces of France. Thus Henry II., Duke of Normandy, caused a superb edifice, for the reception of lepers, (*grande maladrerie*), to be erected near Caen, in the year 1160. This building is now a *maison de détention*. We have also accounts of the *maladreries* of Mondeville, Cagny, Argences, Troarn, Rupierre, Varavielle, Ranville, &c., so that it would appear there was no burgh or commune which had not its special *maladrarium*, *misellarium*, *ladrarium*, or hospital for lepers. (Delarue, *Hist. de la Ville de Caen*, 8vo. Caen, 1820.) Into these houses, individuals affected with ulcers and other chronic diseases of the skin, were also at length received. (Vide G. Horst. *Obs. Med.*, lib. vii. obs. xviii.) P. Foreest. *Obs. Chirurg.*, lib. iv. obs. vii. Riedlin. *Linnæ Medic.*, vol. iii., an. 1677.

dreadful disease has disappeared from almost all the districts of our continent which it formerly ravaged; and Greek elephantiasis, at the present time, is a disease confined to the equatorial or inter-tropical regions of the globe. Much more common among the poor than the rich, it principally attacks those who are in indigence, and strangers after a residence of longer or shorter duration. The disease has been studied by Pococke in Asia Minor, by Prosper Alpinus, and Messrs. Desgenettes and Larrey in Egypt, by Bruce in Abyssinia, Marsden in Sumatra, Marshall in Ceylon, Robinson and Ainslie in India, and Bergeron in Cayenne. It has also been seen in the Antilles, in St. Domingo, Martinique, and New Orleans, on the west coast of Africa, and the islands that lie to the southeast of this continent, Bourbon, the Isle of France, Madagascar, &c.; so that it seems demonstrated that a generally high temperature, joined to a humid and variable state of the atmosphere, is a condition extremely favourable to the development of elephantiasis. Nevertheless, it is well ascertained, that the disease prevailed in the year 1686, in the Faro Islands,<sup>1</sup> which lie to the southwest of Iceland, in the Northern Ocean. (a) Greek elephantiasis has also been seen in France among natives of the country: Vidal, Valentin, and Fodéré, have observed it at Martignes and Vitrolles; Delpech informs us that it is frequently seen at Roussillon, especially in the neighbourhood of Elsne. It is, however, still a question, whether the disease originated in these situations, or has not rather been, as all circumstances would lead us to believe, imported thither and continued hereditarily. The same uncertainty prevails in regard to the origin of the elephantiasis which occurs on the plains of Arragon.

Other causes have been stated, the influence of which on the development of Greek elephantiasis is less apparent. The stagnant waters of marshy districts, the moist heats of autumn, low and sheltered situations, filthy habits, bad food, exposure to wet, &c., have one after another been set forth as adequate to produce the disease; but the whole of these causes occur combined in places where Greek elephantiasis has never been seen. Though inadequate to excite the disease, however, they may unquestionably favour its development, and keep it up in certain districts.

Arætaus, Galen, Schilling, Forest, &c., and in later times, Darwin and Cullen, have held that Greek elephantiasis was contagious. Had the disease truly this character in the olden times, when it prevailed epidemically in Europe? The cases observed in India by Robinson and Ainslie (*Medico-Chirurg. Trans.*, vol. x.), in Madeira by Adams and Heberden, the few I have myself seen in France, where I have observed West Indian Creoles living in the midst of large families without communicating the horrible malady to a single individual, and the concurring testimony of all observers, lead to the conclusion that Greek elephantiasis is never communicated by an individual affected, to an individual in health—that the disease, in a word, is not contagious. One of my pupils, M. Raisin, jun., has oftener than once, and for several days in succession, worn the clothes of a person affected with elephantiasis, without suffering the slightest inconvenience. Many facts prove that Europeans have contracted this disease during a residence in the East and West Indies. Women labouring under elephantiasis have produced children who have never suffered in the same way; but the fact of the hereditary transmissibility of the disease is one not less certainly ascertained. After the most careful study of the affection in the Lazaretto of Madeira, both Adams and Heberden are of opinion, that not only is the disease transmitted hereditarily, but that it occasionally descends through several successive generations. The researches of Dr. Ainslie in India tend to confirm the views of these excellent observers. M. Alibert tells us that he had met with two women who inherited elephantiasis from their parents.

In the Lazaretto of Funchal, the majority of the individuals affected with Greek elephantiasis had not yet attained the age of puberty.

(a) Greek elephantiasis or leprosy, is met with along the western coast of Norway. It is represented by Dr. Danielssen as hereditary, but not contagious. A similar disease has lately appeared in New Brunswick, and is described by Mr. Skene (*Med. Gaz.*, 1844).

<sup>2</sup> De Chamseruc et Coquereau. *Recherches sur l'état actuel de la lèpre en Europe*, &c.; *Mémoires de la Soc. Roy. de Méd.*, t. v. p. 199.



From the other documents examined by Adams, it would appear that in the course of a century, five hundred and twenty-six men, and only three hundred and seventy-three women had been received into that establishment, a difference of nearly a third in favour of women. M. J. C. Soarès, of Marscilles, informs us that, of a hundred individuals attacked with Greek elephantiasis in the Brazils, ninety are of a sanguine or bilious-sanguine temperament.

782. *Diagnosis*.—It is of importance to distinguish accurately between Greek elephantiasis and Arabian elephantiasis, lepra and certain syphilitic affections.<sup>1</sup> Arabian elephantiasis never commences primarily in the skin; even when it follows a confluent lichenous eruption, or a chronic eczema; these affections are evidently causes not elements of the disease. Arabian elephantiasis is observed at the present time in countries under every latitude; Greek elephantiasis, on the contrary, is scarcely seen save among individuals who have lived in one or other of the inter-tropical European colonies, or who are natives of these regions, or who have inherited the disease from their parents. As to Greek leprosy (*lepra vulgaris*), characterized by rounded and pretty broad squamous patches, depressed in their centres, enclosed within a raised reddish circle, and scattered over the surface of the body, it has really nothing in common with elephantiasis save the distinctive epithet.

783. Greek elephantiasis has been maintained to be a mere modification of syphilis; but elephantiasis, besides that it was described long before we have any mention of syphilis, has been observed in many instances when there could be no suspicion of venereal affection, either of recent date or older standing. Further, the blotches and tubercles of syphilis have by no means the same appearance as the tuberculations of elephantiasis. Those of elephantiasis have a shining brownish tint, and oily look, and are attended with a general puffiness, and occasionally with a great degree of insensibility of the skin in their vicinity. The tubercles of syphilis, again, are red or livid, hard, developed in the substance of the corion, clustered together, and almost always consecutive to venereal ulcers of the genital organs; very different, therefore, from the soft, tawny, irregular tubercles, separated from each other by deep fissures, proper to Greek elephantiasis. Lastly, in those rare cases in which Greek elephantiasis is characterized, not by yellowish blotches and oily-looking tubercles, but by fungous and sanious sores, resting upon soft and flabby bases; these are not less distinct from ulcers of syphilitic origin, for the most part so well marked by their indurated and sharply cut but irregular edges, and their grayish bottoms of variable depth. The tubercles of cutaneous cancer, or of lupus, cannot be confounded with those of elephantiasis.

Neither of these is attended with the loss of the hair of the parts they affect, with the development of tubercles on the arch of the palate, or any material alteration of the voice; they have, in addition, peculiar and very constant characters, extremely different from those of Greek elephantiasis.

784. No one now thinks of simulating Greek elephantiasis, although this seems to have been done occasionally in former times.<sup>2</sup> The serious nature of the disease has been noted by every writer who has seen it since the time of Aretæus. Despite the praises that have been lavished on certain medicines, almost all the well-marked and inveterate cases of the disease are incurable. Those who are attacked with it before the age of puberty, commonly die between their twentieth and twenty-fifth year. Those who contract it later in life, may drag on a painful existence for some considerable time. Some have been seen presenting all the outward symptoms of the disease for more than twenty years, without any notable disturbance of the principal functions of the system. The fatal termination is almost always owing to the sequelæ of inflammatory affections of the organs of the voice and respiration, and of those of digestion.

785. *Treatment*.—The treatment in Greek elephantiasis should be directed with a view to prevent the development of tubercles; to favour the cicatrization of sores; to obtain the resolution of such spots and tubercles as exist, when any have been formed; and to

<sup>1</sup> When elephantiasis (*lepra*) reigned epidemically during the middle ages in Europe, those who are suspected of being affected underwent an examination, the model of which may be found in Horstius, Fernelius, Paré, &c., and those pronounced lepers, were shut up in one of the houses appropriated for that purpose.

<sup>2</sup> The case given by Paré deserves to be particularly referred to. Liv. xxiv. chap. viii.

check the progress of chronic inflammation of the larynx, lungs, stomach and intestines, if it has already occurred, or to prevent it entirely, in case it has not yet made its appearance. To attain these ends, removal into a mild and temperate climate has been recommended, and many persons affected with elephantiasis, have quitted intertropical countries for the south of France and Italy, but in general without deriving any benefit from the change. The practitioners of the Antilles are in the habit of sending their patients to the island of Desiderada, remarkable for the mildness of its climate, and the excellence of its fruits, a twofold recommendation, which, it is presumed, should tend to modify the constitution favourably, and to retard the natural course of the disease. Patients should pay the greatest attention to personal cleanliness, and change their linen frequently; they should take gentle exercise, and their spirits must be kept up by the constant presence of some devoted friend or attendant.

Besides the morbid alterations of the skin, some patients exhibit unequivocal symptoms of chronic inflammation of the pharynx and stomach, of the larynx, trachea, and occasionally of the lungs. These ought to be put upon the use of mucilaginous drinks, with a diet consisting of milk, white meats, veal, chicken, or turtle broth, &c. As to the specific properties of the viper in this complaint, modern observers are mostly agreed in regarding them as fabulous.<sup>(a)</sup> Other patients affected with elephantiasis show no symptoms of any serious disorder of the larynx, trachea, lungs, or intestines. In the majority of these cases, I have preferred recommending bland diet, and a regular plan of life, to prescribing a course of active medicines, often uncertain in their primary effects, and occasionally dangerous in their secondary or remote consequences. It cannot surely be a matter of indifference, whether or not individuals are put upon a course of cantharides, of arsenic, of decoction of mezereon bark, &c., who, from all concurring testimony, are known commonly to die at an early age, of some inflammatory gastro-pulmonic affection.

Heberden informs us that he cured a patient in five months, who had taken antimony and mercury fruitlessly for seven years. The medicine employed was a mixture of an ounce and a half of powdered cinchona bark, and half an ounce of powdered sassafras root, made into an electuary with simple syrup, of which the patient took a piece, the size of a nutmeg, twice a day. He, at the same time, rubbed his arms and legs, night and morning, with a mixture of an ounce of oil of tartar, two ounces of sal ammoniac, and eight ounces of brandy. Blisters were also applied between the shoulders. Several cases seem to prove the utility of the muriate of gold, administered in doses, gradually increased from the tenth to the fourth of a grain, during several months, by way of friction, under the tongue. These cases, however, it is much to be regretted, are still very far from satisfactory. Our Indian practitioners have spoken of the *asclepias gigantea* as a kind of specific. Playfair has published an interesting account of the therapeutic effects of this plant, in the first volume of the Transactions of the Medical Society of Calcutta; and Robinson (*Med. Chir. Trs. of Lond.*, first part), thinks that it may be useful in anesthesiac elephantiasis. Sarsaparilla and squill have also been recommended to attention. Turner and Vidal have seen tubercles resolved under the use of alkaline frictions. The tubercles and stains of the disease may be destroyed by the application of caustic when they are not numerous; but it almost always happens that new tubercles are developed in other situations. The discussion of the tubercles of elephantiasis has also been attempted by means of the sulphur, the vapour, and the sea-water douche, ammoniacal frictions, &c.; but the whole of these various remedies have been attended with very uncertain results. The baths recommended by some authors have been held useless by

(a) M. Sigaud (*Du Climat et des Maladies du Bresil*, pp. 389-93) gives the details of the case of a Brazilian who, having suffered for more than four years from leprosy in its worst form, determined to try the effects of the bite of a rattlesnake. The wound was received between the first joints of the little and ring fingers, at ten minutes before twelve (noon), and at half-past eleven the following morning, the man was dead, after great suffering. No autopsic examination was made, owing to the rapid decomposition and extreme fetor of the body. Ten hours after the bite, there was a great depression of the tubercles on the arms and face.



others, as Walesius and M. Cassan. Robinson has advised the application of blisters to the insensible patches of elephantiasis *anesthesiaca*. The bi-chloride of mercury internally, and mercurial frictions externally, have been employed in elephantiasis without success. The various preparations of arsenic have been particularly upheld, for their powers for bringing about the resolution of the tubercles of elephantiasis. But patients have frequently been found to droop and then to die, under the fever which these medicines are apt to light up. In two cases, which were watched by M. Raisin with particular attention, the Asiatic pills,<sup>1</sup> taken regularly for a short season, had soon to be given up on account of the irritation of the gastro-intestinal membrane they occasioned, without benefiting a single symptom of the disease for which they were prescribed.

The whole of these various and fruitless experiments but too forcibly remind us of the accuracy of the prognosis pronounced by Hollerius,—confirmata elephantiasis non curatur (de Morbis internis, p. 64, de elephantiasi).

It is from the labours of the practitioners of the European colonies established in intertropical countries, that science looks for new light in regard to Greek elephantiasis and its treatment. (a)

#### Historical Notices and particular Cases.

786. No mention is made of the collection of Hippocratic writings of elephantiasis. Some interpreters, however, insist on the affection being there indicated under the name of the *Phœnician disease*.<sup>2</sup> The poet Lucretius,<sup>3</sup> forty years before the time of Celsus,<sup>4</sup> first speaks of elephantiasis, and he assigns Egypt as the country where it occurs. Celsus gives the principal characters of elephantiasis, and adds that the disease is scarcely known in Italy, but very common in certain other countries. Galen supplies us with several particular but imperfect cases of elephantiasis, with a view to demonstrate the value of the flesh of the viper; in another place he adds that the disease is common in Alexandria.<sup>5</sup> Aretæus<sup>6</sup> has left a very accurate picture of the symptoms of elephantiasis. The sole objection, indeed, that can be raised to this description of the disease, which is much more detailed than that of Galen and Celsus, must be made on the score of certain forced comparisons and contrasts, the end of which, however, is to explain the origin of the various denominations given at

(a) The various preparations of iodine, and the iodide of mercury and arsenic, merit a careful trial in elephantiasis. If the treatment begun at an early period of the disease, we may hope for success. "In Hindostan, arsenic is the remedy most generally employed, but it is associated with the mudarr (*Asclepias gigantea*) to which Playfair, Robinson, and others have ascribed great virtue. The most accredited form is the following: oxide of arsenic, 55 grains; mudarr powder, 4 ounces and 80 grains; black pepper, 9 ounces: the whole well beaten at intervals for four days, made into a mass with water and divided into 800 pills. Not more than two pills should be taken daily, which are equal to about a seventh of a grain of arsenic. Mr. Marshall treated 200 cases with nitric acid, a drachm in a pint or a pint and a half of water daily; above one third were cured and the remainder were greatly benefited. The Hindoo physicians place their patients during treatment on the following diet: all kinds of game, Sushtiká rice, and Urhur."

<sup>1</sup> Compounded of white oxide of arsenic and black pepper.—Tr.

<sup>2</sup> *φαινική νόσος*, printed in the ordinary editions, evidently by mistake, *φαινικα*. Mackius, in his edition of the works of Hippocrates, fol. Vienna, 1743, has restored the proper reading, which Foesius had only ventured to correct in a note. Galen speaks of a *φαινική νόσος* by which, probably, elephantiasis is meant. M. Alexandre, in his Greek dictionary, quotes Herodotus as his authority for the phrase *φαινική νόσος*, which he translates lepra. There is another passage of Herodotus where lepra and leuce, *λεπρα*, *ἡ λευκή* are mentioned together, the latter term is probably employed in the same sense as it is used by Hippocrates. (Herod., lib. i. p. 59. Bd. in fol. Francof., 1606.)

<sup>3</sup> "Est elephas morbus qui propter flumina Nili.

Gingitur Ægypto in mediâ neque præterea nusquam.

(De Rerum Natura, lib. iv.)

<sup>4</sup> Medicina, lib. iii. sect. xxv.

<sup>5</sup> Galeni Opera. De arte curativâ ad Glauconem, lib. ii. De canero et elephantiasi: "In Alexandria quidem elephantis morbo plurimi corripiuntur propter victus mobum et regionis fervorem. At in Germaniâ et Mysiâ rarissima hæc passio videtur. Et apud Scythos, lactis potatores, nunquam fere apparuit."

<sup>6</sup> Aretæus. De causis et signis morborum. Fol. Ludg. Batav., 1735, p. 69. De elephantiasi.

different times to the disease, such as leontiasis, satyriasis, and elephantiasis. Pliny<sup>7</sup> recapitulates the principal characters of elephantiasis, and tells us that the disease indigenous in Egypt (*Ægypte peculiare hoc malum*), had not been seen in Italy previous to the time of Pompey. The opinion of the contagiousness of elephantiasis, which we find announced in Herodotus and in Galen, is more strongly insisted on by Cælius Aurelianus,<sup>8</sup> who recommends the isolation of those affected with it as a measure necessary to the public health. He also speaks of the advantages which may be derived from blood-letting and purgatives in its treatment. Paul of Ægina,<sup>9</sup> in discussing elephantiasis, dwells more especially on the general hygeiastic measures adapted to strengthen the constitution. Not one of these Greek or Latin authors, except Herodotus, has assimilated elephantiasis with lepra or leuce.

The Arabian writers have described elephantiasis under the name of *juzam*, which their translator have rendered by the word *lepra*. Avicenna<sup>10</sup> rehearses the phenomena already signalized by the Greek and Roman authorities, and particularizes several symptoms of an alarming nature. Several historical writers and others<sup>11</sup> have left us ample documents in regard to the lepra of the middle ages. Hensler,<sup>12</sup> in these latter times, has made their accounts the subject of his particular studies. Lepra is known still to have prevailed in Europe during the fourteenth and fifteenth centuries. Guy de Chauliac, Fernelius, Paré, Vesalius, Horstius, Forestus, &c.,<sup>13</sup> may each be consulted with profit for information upon the lepra which prevailed epidemically during this latter period.

Observations have since been extended, and the disease has been seen in most parts of the globe. In France<sup>14</sup> elephantiasis has been studied by Raymond, Joannis, Ruette, Vidal, Fodéré, Valentin, and others; in Spain<sup>15</sup> very recently by Fuchs, who has given us a map of the various places in which he met with the disease in traveling along the shores of the Mediterranean, and who has studied the anesthesiac variety with particular care; in Belgium and Holland by P. Forest;<sup>16</sup> and in Russia by Martius.<sup>17</sup> In Asia Minor the disease

<sup>7</sup> C. Plinii secundi. Historiæ mundi, lib. xxxvii., fol. Lugd., 1587, p. 642.

<sup>8</sup> Cælius Aurelianus. De morbis acutis et chronicis, 4to. Amstelodami, 1754. De elephantiasi, p. 492.

<sup>9</sup> Pauli Æginetæ. Opus de re medicâ, fol. Parisi, 1532, lib. iii. ch. i.

<sup>10</sup> Avicenna. Canon Medicinæ, fol. Venet, 1564, lib. iv. p. 130.

<sup>11</sup> Theodorici, a physician of Bologna of the thirteenth century, has given a good description of the symptoms of *lepra* (elephantiasis), of which he reckons four varieties. 1st. *Lepra elephantina*; a livid colour of the face and whole body, loss of the eyebrows, atrophy of the muscles between the thumb and fore finger; slow course of the disease. 2d. *Lepra leonina*; a citrine tint of the surface, *rotunditas avilorum*; alteration of the voice: formation of tubercles, &c. 3d. *Lepra tyria* (lyrienne); puffing of the eyelids, face, legs, loss of the nails, &c. 4th. *Lepra decalvans* (alopecique) loss of the hair, leucophlegmatic phenomena; hemorrhage from the nose and gums, ecchymoses, &c. Chirurgia Guidonis, Bruni, Theodorici, &c., fol. Venet., 1519.

<sup>12</sup> Ph. Gabr. Hensler. Vom abendländischen Aussatze im Mittelalter, &c.; on the western leprosy of the middle ages, with an illustrative and historical supplement. 12mo. Hamb., 1790. In his first part, Hensler has collected the greater number of those passages in the older writers, especially of the middle ages and of Arabia, that bear upon the subject of elephantiasis; but these are, after all, the mere materials of history, and required a very different arrangement to make them generally useful, from that they have received at the hands of Hensler. Of this truth conviction is easily obtained, by turning to page 369 of the work, where he confounds the Arabian elephantiasis or Barbadoes leg, Vitiligo, the fourth impetigo of Celsus, certain squamous affections and pellagra, one with the other. The judgment of the physician is not here combined with the erudition of the scholar. But the period at which Hensler wrote, may undoubtedly be charged with the sin of much that is faulty in his works: the admirable disquisitions of Willan upon the diseases of the skin had not yet appeared; Hensler was without a compass on an unknown sea; but he evidently wanted that spirit of penetration which catches a glimpse even of things unknown, and that acute judgment which bids us pause, when others of the mental powers are about to enter upon an erroneous path.

<sup>13</sup> Guy de Chauliac. Chirurgiæ tractatus septem, Ven. fol. 1470 (De leprâ).—Fernelius. Universa medicina, fol. 1679. Coloniz Allobrogum (De elephantia).—Paré. Œuvres complètes (De la lèpre ou ladrerie).—Horstius. Opera, 4to., Gaudæ, 1661 (De leprâ, vol. ii. lib. vii. p. 343).—Vesalius, lib. v. cap. ix. De corporis humani fabricâ.—Schenek. Obs. med. rar.: De elephantiasi seu Græcorum leprâ, p. 776.

<sup>14</sup> Raymond. Histoire de l'éléphantiasis, Lauzanne, 1767.—Ruette. Essai sur l'éléphantiasis et les maladies lépreuses, Paris, 1802, 8vo. (He does not appear to have discriminated at all times accurately between the Greek and Arabian elephantiasis).—Vidal. Mémoire sur la lèpre des Martigues (Mem. Soc. Roy. de Méd., année 1776, p. 161.—Ibid., année 1782, p. 168.

<sup>15</sup> Fuchs. De lepra Arabum, 8vo. Wireeburgi, 1831.

<sup>16</sup> Forestus. Obs. medic. et chir., t. iv. De elephantiasi (scholia).

<sup>17</sup> Martius (Henricus). De leprâ tauricâ, 8vo. (Delectus opusculorum. Novocomi, 1827.) Martius describes a disease endemic in the Crimea, the province of Astrachan, and upon the banks of the Jaik, already observed by Pallas, Falk, Gmelin, and Gueldenstaedt, and which presents the whole of the characters of Greek elephan-



has been studied by Pococke;<sup>1</sup> in *India* by Robinson, &c.;<sup>2</sup> in *Java* by Cleyer;<sup>3</sup> in *Egypt* by Prosper Alpinus;<sup>4</sup> Desgenettes and Larry; in *Abyssinia* by Bruce;<sup>5</sup> on the coast of *Africa* by Winterbottom;<sup>6</sup> in the *Isle of France* by Kennis;<sup>7</sup> in *Madeira*<sup>8</sup> by Heberden, Adams, Heineken; in *America* and *St. Lucia*<sup>9</sup> by Casan; in the *Brazils*<sup>10</sup> by Soarès de Meirelles; in *Surinam*<sup>11</sup> by Schilling; in *Cayenne*<sup>12</sup> by Bajon and Bergeron, who have described it under the name of the red disease of Cayenne (*mal rouge de Cayenne*). To conclude, various cases and descriptions recently published may be consulted with advantage.<sup>13</sup>

CASE CXL.—*Greek elephantiasis; improvement after several attacks of erysipelas.* B \* \* \* was born in Guadaloupe in the year 1807, of healthy parents, of French origin, inhabitants of Pointe-à-Pitre. B.'s father died in Guadaloupe of fever, never having had elephantiasis; his mother resides in Paris in the enjoyment of good health. B \* \* \* was suckled by his mother, as were his two brothers, both established in Guadaloupe, and said to be of sound constitution. Madame B \* \* \* cannot tell how her son became affected by elephantiasis. She had, indeed, seen many persons labouring under the disease in Guadaloupe, where it is believed to be contagious: but she believes she is correct when she says, that her son never had intercourse with any one so affected. As to the contagiousness of the disease, Mad. B \* \* \* observes that she and her son had never lived apart; that during the earlier stages of the disease he frequently slept in the same bed with her; and that since this period, she and his other relations have frequently embraced him without fear and without inconvenience. She adds that the food of the family where she lived, at Pointe-à-Pitre, like that of the inhabitants at large, consisted in great part of the fish caught in the neighbouring seas, on account of the high price of butcher's meat. A physician of the country, whom she had consulted, appeared to ascribe a certain influence to this kind of living in the production of her son's disease.

Under the age of nine years, B \* \* \* suffered only from the indispositions common to children; he was even remarkable for his fresh and healthy complexion. At this time, however, and without known cause, several blotches (taches) and red or yellowish spots (boutons) appeared on the thighs and loins, and subsequently on the face and different other regions of the body; the skin, from having been white, now acquired a colour similar to that of the mulatto; and tubercular

tiasis. But our author adds certain symptoms, that make the lepra taurica appear as a variety of this disease. He tells us, for instance, that left to itself, the lepra increases in severity every year. First year, livid spots; second, spots larger and blackish; third, pruritus, ardor, tubercula; fourth, pains in the joints, tubercles, squamæ, general symptoms, enlargements of the glands; fifth, ulceration of the tubercles; sixth, spreading ulcers of the skin and of the mouth, aggravation of the general symptoms—death. This is the usual termination of the lepra taurica, which only appears among the populace.

<sup>1</sup> Pococke. A description of the east and other countries, fol. 1753.

<sup>2</sup> Ainlie (Whitelaw). Obs. on the lepra Arabica, as it appears in India (Transact. of the Royal Asiatic Society, vol. i.).—Wilson (H.H.). On kushta or leprosy (Transact. of the Med. and Phys. Society of Calcutta, vol. i.).—Robinson. Transact. of the Med. and Chirurg. Society of London, vol. x.—Babington. Medical and Chirurgical Transact., vol. i. p. 27.—Ward. Med. and Surg. Journ., vol. xxxvi. p. 187 (at Malacca).

<sup>3</sup> Cleyer (Ephem. German., Dec. 2, mens. decemb., 8vo., 1683) has given a figure of the disease.

<sup>4</sup> Prosper Alpin (De medicinâ methodicâ, 2 vol. 4to. Lugd., Batav., 1719.—Medicina Egyptiorum, lib. i. p. 56) describes the elephantiasis of the Greeks and the elephantiasis of the Arabians.

<sup>5</sup> Bruce. Travels to discover the sources of the Nile, &c., 5 vols. 4to. Edinb., 1790.

<sup>6</sup> Winterbottom. Account of the Africans in Sierra Leone, vol. ii. c. 4.

<sup>7</sup> Kennis. Obs. sur l'éléphantiasis comme il paraît à l'île-de-France.

<sup>8</sup> Heberden. Transact. of the London College of Physicians, vol. i.—Adams. Obs. on morbid poisons, 4to. London, 1807 (of leprosy, p. 265).—Heineken. Obs. on the leprosy of Madeira (Edin. Med. and Surg. Journ., vol. xxvi. p. 15).

<sup>9</sup> Casan. Mém. sur le climat des Antilles; de la lèpre (mem. soc. méd. d'émulation, t. v. p. 102).

<sup>10</sup> Soarès de Meirelles. Diss. sur l'histoire de l'éléphantiasis, 4to. Paris, 1827.

<sup>11</sup> Schilling. De leprâ commentarius. Recens J. D. Hahn. Lugd., Bat., 8vo., 1778.

<sup>12</sup> Bajon. Mém. pour servir à l'histoire de Cayenne et de la Guyanne française, vol. i-ii. 8vo. Paris, 1777-78.—Bergeron. Diss. sur le mal rouge obs. à Cayenne. 4to, 1823.

<sup>13</sup> Goguelin. Bulletins de la faculté de méd. de Paris, t. ii. p. 91.—Aliberti. Description des maladies de la peau. Paris, 1806 et 1818.—Lawrence and Southey. Two cases of the true elephantiasis (Medico-Chirurgical Transactions. London, 1815, 8vo., vol. vi).—M. J. A. Raisin. Essai sur l'éléphantiasis des Grecs. Paris, 1820.—Cazenave. Considerat. sur l'éléphantiasis Grecs. (Journ. hebdomd., l. iii. p. 146.)

growths, analogous to those which now present themselves (16th Sept., 1024), were evolved on the face and ears. Sarsaparilla was tried for forty days, then thirty of the *médécines de Leroy*, which distressed him greatly, but all without doing any good to the disease, or changing the state of the skin. Madame B \* \* \* and her son embarked for France in 1822. During the passage the disease became considerably worse. At Blois, where they took up their residence on their arrival, B \* \* \* underwent another course of tisan of sarsaparilla, and of artificial Barèges baths, but without benefit. A few tepid baths, taken subsequently, seemed to prove serviceable. On his arrival at Paris, B \* \* \* became a patient at the fourth dispensary, on the 16th of September, 1824, and I had an opportunity of seeing him for nearly two years afterwards. On his admission, B \* \* \* was seventeen years of age, and of low stature. His form was European, but the colour of his skin almost that of a mulatto. The face and extremities were covered with tubercles; the face, more severely affected than any other part, looked generally swollen. The forehead, which was rather high, was beset with flattened and slightly prominent tubercles, from four to five lines in diameter, and of the same bronze-like colour as the skin. There was neither scab nor cicatrice upon it to indicate that the tubercles had ever suppurated. It was crossed by deepish transverse furrows. The skin of the rest of the cranium was free from tubercles, and was covered with strong, straight, black hair; the hairs of the eyebrows were black and scanty. The eyes and eyelids presented no alteration in form, colour, or dimensions. The cilia were distinct but not strong. The nose was large, and very much flattened, and in its general configuration approached that of the negro. A great many small tubercles were clustered upon the alæ of the nose, the surface of which appeared mammillated or lobular. Two months afterwards, the lobe and neighbouring parts were covered in the same manner. The tubercles in these situations were so numerous, that they formed, as it were, one continuous irregularly mammillated mass. Many of these small tubercles, which at first presented the same colour as the skin, became inflamed in succession, and covered with little brownish and strongly adhering scabs; and when several in the vicinity of each other were thus affected, they were all hidden under a uniform incrustation, formed by the union of the lesser scabs. After this kind of inflammatory process had subsided, which was not till a year had expired, the lobe and alæ nasi appeared contracted, and have since continued of diminished magnitude. The lips were thick, somewhat shining, and beset with several tubercles. The chin and cheeks were swollen, and under, and in the thickness of the skin, a number of flat-shaped and slightly prominent tubercles could be distinguished. The conchæ of the ears were much larger than in their natural state. They were swollen, and imbedded in their substance under the skin; a certain number of tubercles, similar to those just described, could be felt. These various alterations gave a particular and hideous character to the physiognomy, but still the countenance bore no resemblance to the head of a lion.

The skin of the neck and trunk was not bronzed like that of the face, being nearly of the same colour as the skin of a young European, and was free from tubercles. The upper extremities presented the following alterations: on the left arm, three or four tubercles only could be felt; they were, however, very numerous on the corresponding forearm, covering its dorsal aspect especially. Some of these tubercles were no more than two or three lines in diameter, others were two and three times larger. Several small tubercles, rising above the level of the skin, and developed in its substance, were also seen on the back of the hand and near the wrist. The smaller tubercles, the size of which did not exceed that of the papulæ of prurigo, were in general prominent, and appeared to be evolved within the substance of the skin; the larger ones, which were like big peas, seemed more deeply situated, and bedded among the subcutaneous cellular tissue. The whole of the tubercles were of the same colour as the skin, and under the finger, felt exactly like little indurated lymphatic glands. Some of these tumours remained stationary for several months, several inflamed and ended in resolution, and others suppurated and became open sores, which never showed any disposition to extend either superficially or in depth; the discharge they poured out was sanguinolent and tenacious, so that the linen of the patient and



the dressings stuck readily to their surface. The secretion dried into brownish or black crusts; those that covered the larger tubercles became prominent, and looked like those of rupia; those that followed the smaller tubercles about the wrist were oval-shaped, and scarcely exceeded the level of the skin. Under the scabs, a cicatrice was slowly formed, which continued of a livid red colour for several months. On the right arm, which was slightly paralyzed in its muscles, nearly the same appearances and phenomena were observed as on the left. The hand was constantly half shut, its integument swollen and indurated, and subsequently stiff and shining.

The lower limbs were slender and weakly, and the patient sometimes complained of a feeling of tension in them. Walking was fatiguing, and running next to impossible. On the thighs the tubercles were not numerous, but in general large. One, situated over the trochanter, ulcerated, and was followed by a pretty broad cicatrice; another, on the buttock, became covered with a brown scab, larger than a shilling, which, when removed, disclosed a sore, with sharp cut and not very highly inflamed edges. In the groin of the right side, an enlarged lymphatic gland, the size of an almond, was discovered. The legs were more thickly covered with tubercles than the thighs. The ankles were swelled; the soles of the feet puffy, and occupied here and there with several, broad, flat and distinct tubercles. The skin here was red and shining at first, but by and by, became pale and wrinkled or puckered in appearance.

The hair, although strong on the scalp, was wanting on the other regions of the body on which it usually appears, at the age which B \* \* \* had now attained; and two years later (1819), there was not a single hair upon the cheek, chin or lip. Between 1818 and 1819, a few scattered hairs did make their appearance on the pubes and axillæ only, situations in which no tubercles had been evolved.

As to the functions of the skin, they appeared much less altered than its structure. Generally, it still preserved its sensibility even over the tubercles; the sense of touch was only blunted in the soles of the feet, which, as I have said, were swollen and tense, and in the right hand, the extensor muscles of which were in a half paralytic state: still the sensibility, even of these parts, could always be aroused by pinching the skin.

Besides the tubercular affection of the skin, and the puffing in places of the subcutaneous cellular tissue, there existed several other alterations which deserve to be mentioned. Along the middle of the palatine arch, for instance, there extended a band of small tubercles, which became regularly broader as it stretched from the incisor teeth towards the uvula and velum palati molliis. Several of these tubercles, of the same colour as the mucous membrane under which they were evolved, inflamed subsequently at different times, and ended in the formation of small yellowish ulcers two or three lines in diameter, which, after continuing stationary for a season, cicatrized like those of the skin. The uvula was enlarged and full of small tubercles. Several were also visible on the pendulous velum. The mucous membrane covering them was very little or not at all inflamed. The only other part of the mouth on which I perceived any tubercles, was the upper surface of the tongue, where there were three or four. Deglutition was easy; the belly was soft, nowise painful, and the organs included within it performed their functions freely. The thorax was pretty well developed; the voice was hoarse, husky and sniveling; the patient felt no pain in the larynx; but for some time had laboured under an habitual cough. An examination of the chest enabled me to detect a slight bronchitis. The affection proved temporary, and the lungs subsequently appeared to be free from all morbid affection. The organs of circulation were in the normal condition. The subcutaneous veins were neither more nor less developed than usual.

With the exception of smell, the senses were possessed in perfect integrity. Ever since the nose had become covered with tubercles, and the disease had extended to the palatine arch, the patient had continued subject to a constant coryza, or cold in the head; this was probably owing to an affection of the mucous membrane of the nasal fossæ, similar in kind to that of the skin and arch of the palate, the consequence of which was an almost complete loss of the sense of smell. B \* \* \* is naturally of a lively disposition, and his conversation is that of an intelligent man. He has a taste for drawing; and since his right hand has become paralyzed, he has even attempted

to gratify his taste by using the pencil with the left. The organs of generation are well developed, and do not appear to have been in any way affected by the disease under which he labours. In 1819, the right testis had not yet descended into the scrotum. That of the left side was of the usual size. No circumstance leads to the belief that B \* \* \* is more insensible to the sight of women than young men of his age; but neither does any particular in his conduct give room for suspecting that he is at all influenced by the *libido inextinguibilis* of which certain writers speak.

In the treatment of this disease, I had recourse at first to the anti-phlogistic system. At various intervals during the course of several months, I covered the face with leeches. The day after each application a little swelling was apparent; but this always subsided in a few days, and left the face what it had been before the bleeding. About a hundred leeches were used in this way, without any improvement, but without detriment. The tepid bath and diluents did not appear to exert any more powerful influence in resolving the tubercles. The digestive organs of the patient seeming to be healthy, I resolved, not without a certain degree of repugnance, on giving the pills of white oxide of arsenic and black pepper (pil. Asiatiques) a trial; and M. Chevalier had them prepared for me, according to the long and singular formula of the memoirs of Calcutta. B \* \* \* took one of these pills, containing the one-sixteenth of a grain of the protoxide of arsenic, daily; after the forty-eighth he began to show unequivocal symptoms of gastro-enteritis. I therefore ordered the medicine to be let off, and returned to the use of the tepid bath and mucilaginous drinks.

At this time B \* \* \* was advised by some one to whom the nature of his disease was probably not well known, to undergo an anti-venereal course, and with this view, he was entered a patient of the Hôpital St. Jacques, on the 11th of March, 1826. But the enlightened physician of that establishment at once perceived the kind of complaint with which he had to do, and no mercurial medicine was prescribed. During his stay in this hospital, on the 24th of March, B \* \* \* had a violent attack of erysipelas of the face, attended with delirium, and a train of other serious symptoms. The inflammation was treated by emollients, two bleedings from the arm, and two blisters to the thighs. B \* \* \* left the Hôpital St. Jacques some time afterwards, and I discovered that the erysipelas had had a very marked and far more favourable effect on the tubercles of the face than any of the remedies I had formerly prescribed. In the first place, the tubercles of the auricle had disappeared, having ended in resolution; the skin, become less brown in its hue, was soft and wrinkled; secondly, several tubercles of the cheeks and chin, and all those of the forehead, save two, were resolved; the lips were not so thick, the nasal fossæ less obstructed, and the voice less hoarse and suppressed; thirdly, many of the tubercles of the alæ nasi, still numerous, were covered with brownish and adhering incrustations; fourthly, the tubercles of the arms and thighs were less numerous than they had been before the erysipelas of the face; several had ended in suppuration, and were now covered with a small blackish scab; fifthly, the hair and eyebrows, which had fallen out in great part after the erysipelas, soon began to shoot again, and before long, appeared at least as thick as ever; sixthly, the tubercles of the palate were in the same state as formerly. I advised B \* \* \* to restrict himself for the present to the use of diluents and the tepid bath. In the month of September, 1825, he was a second time attacked with erysipelas of the face; and, after an interval of four days, with varicella, but suffered less on this occasion. Both of the affections got rapidly well, under the sole use of diluents and pediluvia. At the end of October in the same year, B \* \* \* was a third time seized with erysipelas of the face, which got well as the others had done. These last two attacks of inflammation had a much less obvious influence than the first in bringing about the resolution of the tubercles. Yet the greater number of those of the face had now disappeared; those that remained, had been but lately developed on the nose, and had not been implicated in the inflammation. One circumstance, particularly worthy of notice, is that during the invasion of the erysipelas, and the whole period of the febrile reaction which accompanied it, the tubercles of the extremities became red and hot, as if each of them had been attacked with acute inflammation; it was always as a consequence of this kind



of excitement, that the resolution of those tubercles which disappeared, was accomplished. The knowledge of this physiological phenomenon led me, in the beginning of 1826, to attempt to arouse the indolent tubercles of the extremities, by means of friction with an ointment of the hydriodate of potash. This was first tried on the arm, and had the effect I wished: the whole of the tubercles inflamed; several ran into ulceration, and were followed by small cicatrices; others ended in resolution. This inflammatory process was attended with so much pain, that the patient expressed his decided repugnance to my proposal to try the effect of the same procedure on the lower extremities.

From this time the disease was left to itself. Fresh tubercles went on making their appearance, nearly in the same proportion as others disappeared. B \* \* \* became a patient in the Hôpital St. Louis, in August, 1826. In September, he was attacked anew with erysipelas of the face; the febrile reaction with which it was accompanied, was still felt by the tubercles of the extremities, which, as in the previous attacks of the same kind, became hot, red, and evidently inflamed. B \* \* \* died in February 1827.

CASE CXLI.—*Greek elephantiasis. Various and unavailing modes of treatment.* Death. M \* \* \*, a native of New Orleans, was sprung of parents in easy circumstances. At the age of eleven, a number of blotches, of a pale yellow colour, and little apparent at first, were observed on the thighs and forearms: these were ascribed to the heat of the weather, and no attention paid to them. Two years afterwards, these spots were both more numerous and more conspicuous, and were now pronounced *scorbutic* by the physician who was consulted. Another year elapsed, during which the blotches extended to the face, and a number of small tubercles were evolved in the substance of the skin. A glass of the expressed juice of endive, water-cress, lettuce, and other herbs, was ordered by his physician every morning fasting, and a glass of a decoction of sarsaparilla and the woods, twice during the course of the day. This treatment did no good. The disease made constant progress during the next year; tubercles were evolved at the entrance into the nostrils, which caused a very copious secretion of mucus; the *face began to swell insensibly*; the feet were readily excoriated, and healed with difficulty. M \* \* \*, feeling himself full of life and vigour, thinking little of his ailment, and reckoning on the strength of his constitution, gave himself up, without restriction, to the pleasures of the field, of the table, and of Venus. It was only in the spring of 1821, that he again put himself into the hands of his medical attendant, who prescribed whey, a sudorific tisan, the warm, and, occasionally, the artificial sulphureous water bath, made by the addition of the sulphuret of potash, at a high temperature. These means were followed by no amendment. The patient indulged in his usual habits through the succeeding winter. In the spring of 1822, M \* \* \* applied to another practitioner, who gave him hopes of a speedy cure, from a tisan of sarsaparilla, carrot, &c., saponaceous baths, Belloste's pills,<sup>1</sup> and lotions of althea thrown into the nostrils. During the three or four months that this system was followed, several flesh blotches appeared.

In despair at seeing his infirmity increase, M \* \* \* now resolved to undertake his ease himself; he purchased Leroy's book,<sup>2</sup> and began taking an emetic one day and a purge the next; he then rested a few days, and repeated the medicines; allowing a few more days to pass by, he returned to his vomit, &c., and so on for twenty days continuously. A great degree of weakness, emaciation, and some pain of the stomach were the only results of this emeto-purgative plan of treatment. In the spring of 1823, M \* \* \*, with the advice of one of the physicians he had already consulted, tried a tisan of the leaves of the plantago psyllium internally, and the inunction of the sulphur ointment to the arms only. Four months of this system did no good. M \* \* \*, from having been of a lively turn of mind, was now subdued and melancholy. In the course of the same year, 1823, M \* \* \* put himself under the care of a quack, from whom he took a stone bottle (dame Jeanne) and a half of a medicine, the composition of which was a profound secret; but having accidentally broken one of his large bottles, M \* \* \* found about three pounds of garlie in

pieces, and a glass and a half of antimony at its bottom. This medicine was as unavailing as every thing else. During 1824, M \* \* \* took sea-water baths without benefit, and next year left his native country for France, where he landed on the 15th of May (1825), and immediately came on to Paris. There he entered a Maison de Santé, where he underwent an *anti-syphilitic course*, and at the same time took simple and vapour baths. One of the sub-maxillary glands now inflamed and suppurated. An *anti-scorbutic* plan of treatment was next proposed but rejected by the patient. Under another physician, however, he passed through a course of iodine, and some time afterwards began taking the *pilules Asiaticques*, which, soon causing gastro-intestinal disturbance, had consequently to be suspended. The iodine was tried again at different times. On the 1st of September, 1825, the patient was in the following state:

The face was beset with tubercles, and had a puffy appearance; the complexion was of the dark or bronze colour which distinguishes the mulatto; the scalp was white and showed no tubercles; the skin of the forehead was in the same state as that of the face, bestrewn with tubercles; and, further, furrowed with deep wrinkles. The superciliary ridges were covered with similar tubercles, very numerous, and much crowded, yet without being confluent. Their surface was traversed by oblique folds, which gave them a mammillated or nipple-like character; they projected considerably above or beyond the orbit. The hair of the eyebrows had almost all fallen out; the eyelids were swelled and hard at their edges; the whole of the eyelashes had been lost. The nose was large and much flattened; the nostrils were dilated, misshapen, and ran upwards. An immense number of tubercles were clustered on the *alæ nasi*, the surface of which was knobby and uneven; on the lobe and neighbouring parts they were so numerous that they formed a continuous irregularly mammillated mass. Several of these tubercles which had been inflamed, were covered with small brownish crusts, and the little sores, which secreted the matter that formed these, were long of healing. The cheeks were swollen and also beset with tubercles, though not so thickly as the nose. The lips were large, thick, shining, and covered with tubercles; the chin was likewise swelled, tubercular, and mammillated at the point. A few hairs of the beard appeared here and there, in those parts especially where the skin was merely brown without being affected with tubercles. The ears, in like manner enlarged and tumid, stuck out from the head, and were of a dusky-violet hue, but not occupied by any tubercles. The skin did not present the bronze-like and morbid hue of which mention has been made, lower than the inferior part of the neck. The integument of the trunk was extremely white and fine. The hands, especially the fingers, were swelled; and the colour of their backs, as also of the outer aspects of the forearms, was the same as that of the face. Several brown patches and bands, which stretched down along the angles of the ribs, were apparent on the lower and outer extremities of the shoulder. The skin of the thighs and legs was of a dark-brown. The feet were so much swelled that the patient appeared plain soled.

The arch of the palate was beset with a band of small tubercles, less bulky than those of the skin, but more numerous; they formed a kind of mammillated band, stretching along the median line. The upper part of the pharynx was visibly beset with tubercles. The mucous membrane of the nasal fossæ seemed to be affected with chronic inflammation, and poured out an abundance of purulent secretion. The sense of smell was almost extinct; hearing and sight were enfeebled; taste was perfect, and it was not remarked that touch was blunted. The voice was rough, delivered through the nose, and, at times, almost suppressed.

The organs of generation were in a normal state; the pubes covered with hair, as well as the axillæ, and in a slight degree the breast also. M \* \* \* exhibited nothing of the libidinous appetite mentioned by some writers on elephantiasis. During his stay at Paris, he avowed that towards the sex he felt precisely as other young men of his age.

The patient passed the winter without submitting to any kind of treatment. He went little abroad, and often continued in bed all day. He could not now run rapidly; a great sense of weakness in his limbs compelled him to stop; the slightest pressure caused excoriations and ecchymoses; and the least contusion of the legs was

<sup>1</sup> Compounded of mercury extinguished by rubbing, aloes, scammony, and some opium.—*Tr.*

<sup>2</sup> The *Bachan's* domestic medicine of the French, it is presumed.—*Tr.*



followed by a sore, which was very long of healing. In the month of May, M \* \* \* consented to another mode of treatment proposed to him: *a diaphoretic tisan; frictions along the spinal column, with an ammoniacal liniment; and cauterization of several of the tubercles of the face with the incandescent iron*: all that were thus treated suppurated and soon cicatrized. In September, M \* \* \* complained of violent pain in the right side of the chest, and two days afterwards he expectorated some blood. He was bled to twelve ounces, and felt relieved. The blood abstracted was buffy. He did not recover completely, however; the slightest departure from the strictest regimen caused painful indigestion and sleeplessness. October 24th, the patient had another attack of pain in the right side; fifteen leeches were applied to the part, which did little to relieve him; he coughed a great deal, and expectorated little. The tongue was red, foul, and marked with white streaks. A week afterwards, a number of leeches were applied to the epigastrium. The appetite had now failed; the bowels were obstinately confined. All that was done proved of little avail in relieving the symptoms. The expectoration became purulent, pectoriloquy was detected on the right side, and the patient lost flesh and strength rapidly.

The tubercles of the face were now for the most part in a state of suppuration; the ears were no longer livid or swollen; the hands were emaciated and brown, instead of violet as they had been. November 30th, a profuse diarrhœa succeeded the obstinate constipation which had continued till this time. On the 1st of December the patient became delirious, and on the 3d he expired.

The body was opened, twenty-four hours after death, in the presence of M. Rayer,<sup>1</sup> and of M. Gaide, his pupil. The skin of the face alone bore traces of the elephantiasis under which the patient had laboured whilst he lived. The greater number of the tubercles had been cicatrized, shrunk away, or had ulcerated of themselves. The left side of the chin, to the lower lip, is of a livid or sallow and yellowish hue. Several small striæ are observed on this lip, along the edge, where it joins with the mucous membrane of the mouth, from which the cuticle, in a semi-pultaceous state, is readily removed. The skin of the chin presents a few irregularly circumscribed, nipple-like eminences, covered with cuticle, or hidden by slight squamæ, under which the corion has a slight reddish tint, and appears in some places softened to various depths, in a very remarkable manner. Incised perpendicularly it appears hypertrophied, and on the sides of the chin, is at least two inches thick; by scraping with the scalpel, and still better by maceration, the softened portions of the corion are readily removed. The bronze tint of the skin is not owing to any deposition of pigmentary matter upon the surface of the papillary body; for a perpendicular section through it shows the corion itself to be altered, and the colour to be a consequence of changes undergone in its intimate structure. The integument of the point of the nose, softened in a less degree than that of the chin, is the seat of a number of ulcers of different depths; the surface of this region is covered with a whitish layer, owing to augmented secretion from the sebaceous follicles. This layer removed, a considerable number of small projecting points, of a pearly white, are perceived, which are nothing more than the extremities of the minute epidermic prolongations, that dip into the cavities of the follicles, and form little tubercular offsets, that may be drawn out; after which the skin appears to be perforated by a multitude of conduits, capable of receiving the head of a large pin, which may then be made to penetrate to the depth of nearly a line into the corion. The integument of the forehead and cheeks was covered here and there with a small incrustation, which had followed the ulceration, suppuration, or use of the actual cautery. The same alterations existed in several places of the limbs.

The nasal fossæ, connected together by the almost entire destruction of the septum, presented the following alterations. The mucous membrane completely destroyed in some places, left the bones of the nose exposed; in several places it was covered with a pretty thick layer of muco-purulent matter, in others it was softened and whitish, and here and there was coming off in irregular flaps of small extent. When the muco-purulent layer was removed, a considerable number of small nipple-like projections were exposed, from which little filiform bodies, from half a line to a whole line in length, could be

extracted, formed, in all likelihood, by the concrete fluid of the follicles. In the mouth, two superficial sores, a line and a half across, were discovered on the tongue; these were the only morbid appearances which this organ exhibited. The anterior aspect of the velum palati mollis was slightly whitish on the left side, and was beset on its edges with a number of very small ulcers. The anterior paries of the pharynx, through its whole extent, but especially superiorly, was of a peculiar dull white colour; its free surface was covered with irregular small mammillæ, a number of which could also be traced along that of the œsophagus, projecting, on an average, about a line and a half beyond the level of the mucous membrane. Between this indurated and mammillated state of the mucous membrane of the pharynx and œsophagus, and the morbid alterations of the skin, there was a very great analogy. The mucous membrane of the larynx was lined on its inner surface by a purulent or pseudo-membranous deposit, of considerable thickness, and easily removable with the back of the scalpel. Under this layer, the mucous membrane appeared to be much paler than it is in the normal state. It was also every where thinner than usual, and presented an ulcer two lines in length by one in breadth, which exposed the crico-arytenoid muscle of the right side. The posterior aspect of the epiglottis was possessed by a number of very minute sores, like those of the pendulous velum of the palate. The edges and apex of this organ, everywhere the seat of ulceration, were of a very decided grayish colour. At the place where the epiglottis is continuous with the larynx, and above the margin where the mucous membrane of this part joins that of the pharynx, a small quantity of black matter was observed to have been deposited. The trachea was not sensibly altered, and the bronchi did not exhibit any morbid changes other than the communication of a few of these tubes with the tubercular cavities which I am about to mention. The subcutaneous cellular tissue of the anterior part of the right side of the neck was infiltrated with pus. Several lymphatic glands in the vicinity were enlarged, of a yellowish-gray colour, and softer than natural.

The right lung was much more affected than the left, and its superior lobe was thickly beset with small miliary tubercles, especially upwards, where there was a cavity large enough to hold a pigeon's egg. Between the tubercles the substance of the lung was of a reddish-brown colour, and a good deal indurated. The inferior lobe was affected in the latter way, and showed no signs of tubercles. The left lung contained a good many tubercles, and several small cavities. It adhered slightly to the pleura; on the right side the adhesions were more extensive and stronger, and the pleura contained about a couple of pints of sero-sanguinolent fluid.

The heart, soft and small, was unaltered. The mucous membrane of the stomach, somewhat thickened near the pyloric end of the organ, was, on the contrary, extremely thin near the cardiac extremity, and, in some places, appeared to be even entirely destroyed. Almost the whole surface of the viscus was covered with very distinct vascular ramifications. A vascular injection of the same kind was visible through the whole extent of the intestinal canal, which was also ulcerated in three different places, and the mucous membrane softened in the lower part of the colon. The liver was healthy, as were the kidneys, and the mesenteric glands, and the spleen. The external organs of generation were of the usual size. The glands of the groin were very much enlarged, and, when divided, they had the consistence and appearance of greasy liver.

#### ARTIFICIAL TUBERCULAR INFLAMMATIONS.

787. The bite or sting of many insects, such as the wasp (*vespa*), gnat (*culex pepiens*), bug (*cimex lectularius*), spider (*aranea*), &c., is generally followed by acute circumscribed inflammation, which frequently assumes the tubercular shape. These affections have, for the most part, a particular appearance; their causes, too, are generally known.

788. The sting of the wasp and hornet is more painful than that of the common bee, and often occasions an erysipelatous inflammation. When the sting has been left in the skin it should be extracted as quickly as possible, and a compress of linen dipped in cold water or

<sup>1</sup> M. Raisin is the narrator of this case.



a saturnine solution applied to the part. We are assured that the sting of these insects has occasionally been followed by very serious consequences.

789. The bites of *gnats* are very commonly succeeded by small circumscribed indurations, with surrounding œdematous swelling and redness. The itching occasioned by gnat-bites, is to be allayed by an ether or vinegar wash. In the south of Europe, and in warm latitudes generally, these insects are so troublesome that the inhabitants have to defend themselves during the night by surrounding their beds with a musquito-net.

790. But it is after the bites of the common *bug* that the skin appears to be covered with an eruption of a truly tubercular nature. In spite of all that can be done in some hospitals, this insect, secreted in the bedsteads, especially if they be of wood, in the flooring, or in the partitions of the building, torment the patients during the night, and hinder them from closing their eyes. I have seen patients whose throats, bosoms, and limbs were covered with a copious eruption of lenticular tubercles from this cause, each of which presented a central point, marking the seat of the puncture.

791. The *flea* (*pulex irritans*), which commonly occasions a little red spot with a deeper central point, also gives rise to tubercular-looking elevations in individuals with a fine and highly irritable skin.

792. The *spider*<sup>1</sup> sometimes causes a red and prominent spot, the irritation of which may be relieved by simply washing the part with cold water. The *tarentula* (*aranea tarentula*) causes accidents of a far more serious description.<sup>2</sup> The harvest bug, and other insects that pierce the skin, also occasion severe itching, which is soon followed by large papulæ, or small reddish or yellow tubercles.

793. There are several other accidental tubercles which approach still more closely to the true tubercular inflammations of the skin, both in their appearance and tardy progress. One of my pupils of a sanguine lymphatic temperament, whilst dissecting, chanced to scratch the back of his hand, and in the place there was shortly afterwards developed a flattened, reddish, and irregular circumscribed tubercle, which continued during several years, in spite of all that could be done to effect its discussion. I have oftener than once seen leech-bites, and the slight use of caustics, succeeded in individuals of scrofulous constitution, by indolent, reddish tubercles. Nipple-like tuberculations are also occasionally seen following small-pox, and blisters after they are healed up.

## SYPHILIDA, SYPHILIDES.

### Vocab. Syphilis.

794. By the term Syphilide, I understand every alteration of the outer integument of the body which is produced by a general venereal affection of the system. Alterations of the skin of this kind are commonly associated with one or several other secondary symptoms of lues venerea, and, in the great majority of cases, are consequences of a contagious specific inflammation of the external organs of generation. They consist of exanthemata, bullæ, vesiculæ, papulæ, squamæ, and tubercula, which almost in every instance are evolved upon bases of a reddish-yellow, or copper colour. They also occur in the shape of cutaneous ulcers with yellowish or grayish bottoms, sharply cut edges, and occasionally possessing the phagedænic or spreading character. They show themselves, in fine, as special affections of the papillæ, and of the nails and hair.

795. In the epidemic syphilis of the 15th and 16th centuries, venereal eruptions occurred so commonly a short time after infection, that the disease was regarded as a contagious affection of the skin: at the present day, and indeed for a long time past, these eruptions have been much less frequent, and have always appeared at an epoch much

more remote from the receipt of the poison than they did formerly. This circumstance is explicable from the disease during several ages having been transmitted almost exclusively by the intercourse of the sexes without primary general infection. If the extreme frequency of primary or local venereal symptoms at the present day be considered, cutaneous eruptions may even be said to be rare. It would appear that in consequence of the great number of transmissions, the venereal poison had lost something of its original energy, and that its general effects on the system had in consequence become less common. It is certain, moreover, that the poison is neither so readily transmitted nor possessed of such virulence at every period of the existence of the sores and discharges by which it is propagated.

796. The study of the syphilides cannot be entered upon absolutely, and independently of the other symptoms of syphilis, whether these precede, accompany, or follow the eruptions of the skin which characterize them. It is impossible above all to study the venereal eruptions apart from the primary symptoms to which they succeed after an interval of shorter or longer duration. The necessity of considering the primary and secondary symptoms together, becomes the more imperative when we are aware of the fact that venereal eruptions do not appear with similar frequency after every variety of primary symptom, and that this or that form of eruption succeeds this or that species of contagious inflammation of the organs of generation.

797. These relations of the venereal eruptions or syphilides to contagious and virulent inflammations of the genital parts, scarcely suspected before the syphilitic epidemic of the 16th century, very obvious during the prevalence of that pestilence, when the eruption occasionally appeared at the same time as the affection of the genitals, and generally before the end of the fourth or fifth week thereafter, have become much less strikingly and obviously connected of late, when it is usual for several months at least, and often for several years to elapse between the occurrence and the cure of primary symptoms on the one hand, and the appearance of secondary infections on the other.

798. Carmichael has sought to connect exclusively the appearance of certain venereal eruptions with the occurrence of particular primary symptoms. This view has been successfully attacked by Rose, Guthrie, Bacot, Hennen, &c., yet it would be going too far to say, that no particular secondary symptom was more especially associated with one form of primary symptom than another.

799. Primary symptoms.—The number, nature, and characters of the primary symptoms of syphilis have of late years been subjects of pretty smart dispute among medical men, whence the necessity of studying these symptoms, both in themselves and with reference to the general infection, to the end that their relations to the various forms of venereal eruption, and other secondary symptoms may be the better understood.

800. The primary symptoms of syphilis are, 1st.—Syphilitic gonorrhœa; 2d.—syphilitic inflammation of the glans penis; 3d.—the simple syphilitic ulcer (two varieties); 4th.—the indurated syphilitic ulcer (the Hunterian chancre); 5th.—the phagedænic syphilitic ulcer; 6th.—the gangrenous ulcer; 7th.—the bubo.

The whole of these affections are due to one cause, and are of the same essential nature;<sup>3</sup> they arise from, and are reproduced the one

<sup>3</sup> "Six amis, après un repas peu frugal, eurent tous commerce avec la même fille qui leur donna à tous la vérole. Elle se manifesta chez eux avec des symptômes différens; deux eurent des chancres et des poulains; deux autres la chaudepisse; le cinquième eut un chancre; et le sixième un seul poulain." (Vigaroux. Observ. et remarques sur la complicité des sympt. vénér. avec d'autres virus.)—"M\*\*\*, négociant d'une ville maritime, voyageait depuis deux mois sans avoir exposé sa santé avec aucune femme. Lorsqu'il fut arrivé à Paris, il fit la connaissance d'une jeune fille, avec laquelle il cohabita. Après huit jours il me fit appeler, et je lui trouvai le prépuce et le gland couverts de chancres profonds et douloureux. Je visitai aussitôt la jeune personne qui n'avait qu'un écoulement, encore était-il fort peu abondant. Elle est restée sous nos yeux pendant tout le traitement de M\*\*\* et malgré les recherches les plus exactes, il ne m'a pas été possible d'apercevoir d'autres symptômes." (Obs. de Cullériér, citée par M. Lagneau. Exposé de sympt. de la malad. vénér. in 8o, 5e ed. 1818, p. 30.) Hennen relates a similar case. (Military surgery, 3d ed. 8vo, p. 534. Lond., 1829.) (a)

<sup>1</sup> Dict. des sc. med. Art. Abeille.

<sup>2</sup> Baglivi. Dis. de anatome, morsu et affectibus tarentulæ. Opera omnia, p. 60, 4to. Lugd., 1745.

(a) In the above note Cullériér, cited by Lagneau, tells of six men having been inoculated after intercourse with the same female, two having chancres and buboes, two gonorrhœa, the fifth a chancre, and



by the other at certain periods of their existence, but not with like activity nor in similar proportions. (a) Inflammation of the surface of the glans, and simple sores are so often associated that Carmichael believes them to be produced by a particular morbid poison.

the sixth a bubo alone. This writer gives also the case of a person from a distant city, having, after his arrival in Paris, cohabited with a young girl, from whom he contracted numerous deep and painful chancres in the glans and prepuce; although the surgeon in careful examination was unable to detect any thing more than mere gonorrhœa in the female herself.

The explanation of cases of this nature is, after all, not difficult without our still admitting an identity of the gonorrhœal and chancreous in proper syphilitic virus. The person who communicated the two diseases had them both. Some have been infected with the one, some with the other, while some, again, have entirely escaped. M. Ricord has shown that chancres often exist deep in the vagina or in the *os uteri*. "I believe" says Mr. Herbert Mayo (*Lectures on Syphilis in Med. Gaz.*, 1839), "from observation that such chancres, not external in women may remain for months in an indolent and unprogressive state. I attended a gentleman for three successive chancres which he had caught, at intervals of a very few months, from the same woman, who would have it that she was in perfect health. At last she consented to allow me to examine her, when I found two small ulcers within the external labia which got well under mercury. The story of the Portuguese opera dancer, mentioned by Dr. Ferguson, and already quoted, is doubtless to be explained in the same way.

"This woman had inoculated several with chancres; but she herself continued on the stage for many months afterwards in apparently good health.

"A man labouring under a slight gonorrhœa, as it may be called, but without any chancre in the glans or prepuce, has sometimes inoculated a female, with whom he cohabited, with true syphilis. Careful examination in such a case has revealed the existence of a chancre just within the meatus, and explained the apparent anomaly."

(a) As I have elsewhere stated, I believe this position to be untenable. Desirous to avoid discussion, and not to occupy space by needless details, I shall merely repeat on this occasion the condensed view presented elsewhere.

"In detailing the causes of urethritis, I mentioned that gonorrhœa was produced, principally, by the contact of virus resulting from morbid secretion of the mucous surface of the urethra in males and of the vagina in females. I adverted to that other opinion, that the disease was also caused by the matter secreted from chancre. At the present time we have small reason for adhering to this last notion, disproved as it is by careful observations and experiments. The fallacy of the belief in the chancreous origin of gonorrhœa was kept up by the fact of an urethral discharge, accompanied by symptoms of irritation, following the introduction of the matter from chancre into the urethra. But more careful inspection showed that in this case there was true inoculation, and that an ulcer was formed in the meatus, the irritation and discharge from which simulated and were taken for gonorrhœa. We are authorized, in the existing state of our knowledge on this subject, to reject the opinion of Hunter, who tells us, as a reason for giving small doses of mercury in the case of gonorrhœa, 'it is always necessary to have in view the possibility of some of the matter being absorbed and afterwards appearing in the form of a lues venerea.'

"Inoculation affords the true test in this question, as clearly proved by M. Ricord (*A Practical Treatise on Venereal Diseases*, &c.). He has shown that the matter of gonorrhœa never produces chancre, nor does the pus of chancre give rise to gonorrhœa, when each respectively has been applied to the surfaces and tissues in which these diseases are developed in common. 'The gonorrhœal secretion, applied to the mucous membrane of the eye, has never produced chancres of the conjunctiva or eyelids, nor has the muco-purulent secretion of gonorrhœal ophthalmia ever produced chancres by inoculation, or otherwise, although the eyelids are susceptible of being injected by chancre. We may add, that the muco-pus of balanitis, &c., the consequence of an impure coition, or produced artificially by an irritant,

801. *Syphilitic gonorrhœa*.<sup>1</sup>—This is a contagious inflammation of the urethra, glans, and prepuce in the male, of the vagina and occa-

has never furnished a result by inoculation, and that these affections, therefore, cannot be followed by symptoms of constitutional syphilis whenever they have existed without chancres.

"Without, in this place, entering into the discussion and history of all the symptoms which have been attributed to gonorrhœa, there are two which are pretty frequent and regular, as consecutive symptoms; these are buboes (yet far less frequent than after chancre) and swelled testicle (epididymite).

"I have ascertained by inoculation, that the pus from buboes which are consequent on gonorrhœa, does not inoculate, even should they terminate in suppuration, which is rarely the case: they otherwise partake only of the nature of an engorgement or simple abscess, whose characters frequently correspond to strumous and not syphilitic affections.

"As to swelled testicle, which still more rarely suppurates, the pus never produced any thing by inoculation.

"The observations made upon gonorrhœa, during my researches upon inoculation, lead to the following propositions:—

"I. The matter of a gonorrhœa, applied to a healthy mucous membrane, causes gonorrhœal inflammation so much the more easily the nearer it approaches the purulent form, and therefore, contrary to the opinion of Wathely, the less mucous its nature.

"II. Under no circumstances can it produce chancre; but as an irritating matter, like that of coryza, for instance, it may excoriate the skin, with which it remains some time in contact, but it never produces a specific ulcer. Convinced of these truths, which were so often verified, one of my pupils, M. Léon Ratier, often inoculated himself with the muco-pus of gonorrhœa upon the skin of the forearm, without any results.

"III. The consecutive, undoubted, and regular symptoms of gonorrhœa, do not furnish an inoculable pus.

"IV. The symptoms of constitutional syphilis are not the consequence of gonorrhœa. In all the cases in which authors mention that it was an antecedent, the frequency of which precisely corresponds with that of masked chancres (chancres larvés), the diagnosis was not correct; the diseased surfaces not having been examined.

"V. Lastly, the only correct means of diagnosis, in the present state of science, is inoculation. Every gonorrhœa which is tested by inoculation in its various periods, without producing any result, is only a simple affection, and incapable of communicating syphilis, whether primary in another subject, or constitutional in the one first affected."—*Bell & Stokes' Lectures*, &c., pp. 634-5, vol. i. 3d edit.

<sup>1</sup> There is no mention made in any part of the writings of Hippocrates of a painful and contagious flux of the genital organs. Celsus speaks of a *nimie profusions seminis*, but not of a *blenorhagia*, or flow of mucus (*De re medicâ*, lib. iv. sect. xxi); Swediaur, and several other writers, have interpreted this passage amiss. Neither does Galen treat of more than a flow of the seminal fluid: *Igitur gonorrhœa instrumentorum seminis affectio est, non pudendorum* (*De Gonorrhœa priapismo*, &c., in the treatise, *de locis affectis*, lib. iv. cap. vi). It would appear consequently that the Greeks and Romans were unacquainted with syphilitic blenorhagia.

We read, however, in a book much anterior to any of the writings quoted, *Leviticus* to wit, chap. xvi., some very strict ordinances relative to men labouring under a *flow of semen*, and it seems much more probable that the question here is of a true blenorhœa than of a flux of the seminal fluid, an infirmity far too uncommon ever to have been made the subject of any sanitary law. It is very likely, therefore, that blenorhagia was frequent among the Jews. In Europe it was certainly rare before the end of the middle ages. Brassavolus (*De morbo Gallico*) and Fernelius (*De morbis contagiosis*, lib. ii. cap. xiv.) are generally allowed to have been the first who described gonorrhœa as an effect of the morbid poison *lues venerea*, and Astruc assures us, and his is the opinion of Fallopius, that venereal gonorrhœa was not observed during the earlier periods of the epidemic of the 16th century (*Astruc de Morbis Venereis*, 4to. Paris, 1738, p. 77).

More recently, Fr. Balfour (*De Gonorrhœa virulenta*, 8vo. Edinb., 1767), and W. Ellis (*An Essay on the cure of venereal Gonorrhœa and Gleet*, 8vo. Lond., 1771), started the opinion that clap and pox were perfectly distinct diseases, and this opinion has been since espoused by Duncan, Ehrman, Lafont-Gouzi, Hernandez, and others. On the other hand, T. Bayford (the Effects of Injections into the Urethra, &c., 8vo. Lond., 1772) about the same time as Ellis, and subsequently, Preteau (*Consid. prat. sur la gonorrhée virulente*, 8vo. Paris, 1815) have maintained the identity of the cause of gonorrhœa and syphilis.

For my own part, the development of venereal eruptions after syphilitic gonorrhœas and the engenderment of venereal sores by the contact of gonorrhœal matter, and the contrary, induce me to believe that these several affections are different effects of the same cause. As to non-syphilitic blenorhagias, I conceive them at the present day to be extremely rare. I have, however, seen true discharges from the urethra in



sionally of the urethra in the female. In the male this affection is announced by the secretion of a yellowish or greenish-white fluid with scalding and pain in making water, and involuntary and frequently repeated erections. This of all the primary symptoms of syphilis is that which is most frequently observed at the present day.

802. In the female attacked with syphilitic gonorrhœa, the inflammation may extend from the vagina, where it begins, to the urethra, the cervix uteri, and pudenda; it is occasionally accompanied with excoriation of the labia majora and minora. In its acute state, this inflammation gives rise to a flow of yellowish or greenish fluid, which, inoculated by the intercourse of the sexes, reproduces the same, or some other form of venereal disease.<sup>1</sup> This character distinguishes syphilitic blenorhœa from leucorrhœa, and every other form of discharge, such as that which depends on a rheumatic or arthritic cause, the irritation of teething, &c., to which these parts are subject.

803. In the male, the venereal swelled testicle, the swelling of the prostate and Cowper's glands; in the female, the inflammation of the uterus or of the ovaries; in both the ophthalmia, (a) the iritis and gonorrhœal arthritis, are the secondary mischiefs of most frequent occurrence; but severe erysipelas and even gangrene have been observed attacking the glans and prepuce in a few rare and very bad cases.

The buboes occasionally observed along with gonorrhœa are generally less serious than those which accompany syphilitic sores, or which are developed during their treatment. Venereal arthritis is more common after gonorrhœa than any other form of primary symptom.

804. *Cutaneous eruptions*, secondary to gonorrhœa, are rare: they occur especially in a much smaller ratio than after syphilitic ulcers, whether superficial or deep. Yet I have seen every form of syphilide as consequences of gonorrhœal infection. Considered in regard to their relative frequency, they may be arranged in the following order:—papula, exanthemata, psyraciacus pustules, squamæ, syphilitic tubercles.

805. Syphilitic gonorrhœa, treated by means of rest, cooling diet, local and general baths, occasionally by the local, and even by the general abstraction of blood, and in its latter stages by the balsam of Copaiba, or Cubebs pepper, gets well in general between the twentieth and thirtieth day. Neglected or mismanaged, the disease is apt to be followed by stricture of the urethra, &c. After the discharge has ceased I am in the habit occasionally of prescribing the pills of Beloste, or of Sedillot<sup>2</sup> for a time, with a view of modifying the constitution, and of preventing secondary mischief.

806. *Syphilitic blenorhœa of the glans*.<sup>3</sup> A muco-purulent con-

(a) Gonorrhœal ophthalmia requires a very bold and vigorous practice—the chief points of which will consist in early and free blood-letting, and the application of stimulants and astringents to the eyes. The nitrate of silver is the preferred article on these occasions.

children cutting their teeth (Mem. sur les inflam. non-virulentes des membr. muq. des org. de la générat. des enfans, 8vo. Paris, 1821); and I have met with several cases of arthritic discharges, upon which Bell (on Gonorrh. Virulenta, &c., 8vo. Edinb., 1793), Swediaur (Tr. des Mal. Vener., pp. 56, 60), Barthez (Tr. des mal. Goutteuses, t. ii. p. 324) and Cuecon (Rec. period. de la Soc. de méd., t. ix. p. 156) have published interesting observations. With regard to the epidemic blenorhœagias that sometimes prevailed, I refer to the remarks of Blas (Obs. Chirurg. Med., Magd., 1731), and of Winkler (Rec. period. de litt. méd., étrangère, p. 152).

<sup>1</sup> Hunter thought that gonorrhœa could produce chancre, and *vice versa*. Bell disputes this opinion, and informs us that, in an experiment in which the matter of gonorrhœa was placed between the prepuce and glans, the disease that followed was clap, whilst the poison of a chancre, inserted into the urethra, produced a sore of the same description. I believe that matters turn out most generally as Bell has stated them; but his experiment does not by any means prove that the matter of gonorrhœa can never produce a chancre. According to Carmichael, not only will gonorrhœa not produce chancre, but gonorrhœal infection will be followed by eruptions of a different order from those that succeed chancre. The erroneousness of this assertion has to my mind been demonstrated. Hunter (on the venereal) gives two cases of general infection (ulcers of the throat, pustules), happening after gonorrhœa, and M. Lagneau relates the case of a young man who, eight months after having had gonorrhœa, was attacked with ulcers of the velum palati, lenticular tubercles over the whole surface of the body, and incrustations of the hairy scalp. Vide also Lombard. (Cours de Chirurgie Pratique sur la maladie vénérienne, t. ii. p. 50).—Swediaur. (Traité complet des mal. syphilitiques, 8vo., 7e éd. 1817).—Fabre. (Traité des mal. ven., 4e éd., p. 47.)

<sup>2</sup> The blue pill—that of Beloste being combined with aloes and aromatics—that of Sedillot being made with the blue ointment, gum, and sugar.—Tr.

<sup>3</sup> Sydenham describes this affection: "Ipse vidi virulentam hujusmodi materiam

tagious discharge from the surface of the glans and inner aspect of the prepuce, of a vivid red generally, and in some places denuded of their epithelium. This discharge, which is transmissible by sexual intercourse, may give rise to other venereal symptoms. (b) In this disease the discharge is not poured out from every point of the surfaces of the glans and prepuce, but from irregular, highly inflamed, and occasionally excoriated patches, upon which M. Desruelles has sometimes seen false membranes deposited, which subsequently formed adhesions.

807. Syphilitic blenorhœa of the glans and prepuce requires to be carefully distinguished from an increase of the secretion poured out by the sebaceous follicles of these parts, and from accumulations there of the fluid of the follicles, through neglect of cleanliness. It must also be distinguished from eczema of the glans and prepuce, in which the discharge, more serous in its qualities, is independent of all venereal indication, whether primary or secondary.

Blenorrhœa of the glans is sometimes associated with urethral gonorrhœa, and with simple venereal ulcers of the penis; when it occurs without such complications, it may be cured in a few days by attention to cleanliness, and the use of cold lotions with the extractum saturni.

808. Blenorhœa of the glans, without complication, is very rarely followed by secondary symptoms; when cutaneous eruptions have been seen to succeed the affection, it will almost always be found to have occurred associated with gonorrhœa, or venereal sores.

809. *Primary venereal sores*.<sup>4</sup>—These sores occur under five differ-

(b) The remarks, made in a former note, on the difference between urethral or common gonorrhœa and chancre, apply to syphilitic blenorhœa of the glans (*balanitis*). This latter is caused by gonorrhœal virus and neither causes nor is induced by chancrous matter.

per substantiam glandis porosam exudare, non per urethram ejectam, nulloque ulcere vel glandem occupante vel præputium. (Opera medica, 4to. Geneva, 1769, t. i. Epist. ii. p. 205.) J. Vercelloni also mentions it. (De pupendorum morbis et lue venerea tetra biblion. Asti, 1716, 8vo.)

M. Desruelles has given a good account of the affection, and is the first who speaks of the variety with pseudo-membranous deposits. (Of two hundred and ten men attacked with the disease, fifty had it in the simple form; one hundred and fifty-five had it complicated with gonorrhœa or ulcers.)

Astruc saw a young man labouring under ophthalmia, from having carried his fingers, impregnated with the matter of a blenorhœa of the glans, with which he was affected, to his eyes. (De morbis veneris, lib. iii. cap. iii. De gonor. spuria.)

<sup>4</sup> A loose interpretation of the descriptions left us by the Greek and Roman writers, of ulcers of the genital organs, neglect of the writers of the sixteenth century, imperfect details of cases, and purely hypothetical notions in regard to the predisposing and essential causes of these ulcers, have conspired to introduce confusion into the determination of their species, and accounts of their several characters. Had the study of anterior works not been neglected, we should not have had certain appearances, observed and described previously to the use of mercury, attributed to its exhibition, and distinctions made with care by the practitioners of the sixteenth century, would not have first been held as impossible or useless, and subsequently been reproduced, from new data, by the more accurate among the observers of later times.

Hippocrates mentions, but does not describe, ulcers of the pudenda. (De naturâ muliebri, sect. v. ed. Foes. p. 582.) Celsus gives a careful account of phymosis, and of simple, phagedenic, and gangrenous ulcers of the glans and prepuce; but he does not say that these sores are contagious, or followed by secondary consequences. (De re medica, lib. vi. sect. xviii. 2-4.) Galen speaks of ulcers of the penis and pudenda (de locis affectis, lib. vi. cap. vi.—De compos. pharm. secund. locos, lib. ix.), but is much less complete than Celsus.

Lanfrancus (Chirurg. magna et parva, fol. 1490, tom. iii. cap. ii.), and Gulielmus de Saliceto (Chirurgia, fol. 1476, lib. i. cap. xiii.), in the thirteenth century, are the first who speak of ulcers and pustules of the glans happening *post coitum cum feda muliere*. In the fourteenth century, Bernard Gordon, Guy de Chauliac, and Arnaldus de Villanova, severally make mention of sores contracted *propter decubitus cum muliere feda*.

During the height of the great syphilitic epidemic at the end of the fifteenth and beginning of the sixteenth century, contagious sores of the genital organs were observed and commented on as one of the symptoms of the disease, by great numbers of writers. (Casp. Torella.—De ulceribus in pudendagra tractatus.)

Fallopius has left a good account of venereal ulcers. He distinguishes three kinds, which very evidently correspond with the three species described with great care in these latter days by Carmichael:—"Signi cariei benignæ sunt: primum enim suboritur pustulæ quædam parvæ et candidæ, quæ quidem non excedunt crassitatem unius grani panici minimi; pustulæ erumpunt; his ruptis remanet ulcusculum rotundum, in medio habens punctum candidum, penetrans, aliquantulum simplex, vel duplicatum; aliquando tota corona glandis inficitur hujusmodi ulceribus, quandoque simul copulantur, et ex duobus, vel tribus, vel quatuor unum fit, ita ut sit veluti linea cingens, et coronans glandem; ista est sine dolore; levis et moderatus pruritus; facillime cedit medicamento (this is the simple sore of Carmichael).—Secunda species sævior est, ista est et genus quoddam ulceris rotundi, sed in medio non adest punctum album; adest livor in ulcere, et labra leniter attoluntur, purpureo colore infecta; aliquantisper



ent forms: 1st, the simple sore; 2d, the indurated sore (the Hunterian chancre); 3d, the phagedenic sore; 4th, the gangrenous sore; and 5th, the venereal sore becomes cancerous. They have the common and essential character of being produced by the same morbid poison, and of being followed by venereal eruptions, and other secondary symptoms of various character.

810. Ulcers are less common than gonorrhœa as the primary symptoms of venereal infection. They are divided and distinguished from one another by their progress and appearance; their cause and their secondary consequences separate them from every other description of sore, accidental or factitious, affecting the organs of generation. All are not alike severe: the phagedenic and the gangrenous ulcer occasion local mischief, often of a serious nature; the indurated sore, or Hunterian chancre, is healed with greater difficulty than the simple ulcer. As to the relative frequency and extent of secondary symptoms after each, opinions are divided, and data are yet wanting upon which accurate conclusions may be formed. I have fancied that secondary mischief was both more frequent and more severe after the indurated sore than any other form of local affection.

811. The simple venereal ulcer.—(*Venerola vulgaris*, Evans; the common chancre of several French pathologists.) Primary sores, acute in their character, contagious, arising from local infection, the edges of which are neither callous nor deeply indurated. These are the most common of all the forms of venereal ulcer.

Simple sores present several varieties in their appearance, their number, their seat, their course, and their continuance.

812. A variety of the simple ulcer is occasionally observed on the glans and inner surface of the prepuce, the bottom of which, before long, becomes raised, and, as it were, fungous (*ulcus elevatum*). When these sores, which are seldom seen in greater numbers than two or three together, are evolved on the inner surface of the prepuce, or upon the body of the penis, they begin in the shape of a small pustule, that continues for a day or two; a slight scab is then formed, which, on being thrown off, leaves exposed a small excavated ulcer, of a round or oval figure, and surrounded with some redness. The bottom of this sore begins to fill up in the course of the second week, and at a later period rises gradually above the level of the surrounding integuments, presenting a smooth surface of the usual colour of a simple wound, but without granulations, and having something of a *fungous appearance*. It is when the sore is in the latter state that patients commonly first seek advice.

813. Other simple sores (common chancres) are evolved behind the corona glandis and on the parts of the prepuce immediately contiguous to it. In this case there are almost always several sores, generally four or five, and I have counted as many as fifteen, when they have all the look of an eruption. *First period* (*excavated pseudo-membranous state*). Each of these sores begins as a little red spot, which is soon replaced by a yellowish-white point that might be covered with the head of a pin. In the course of a few days this

profundum est hoc ulcus (this is the sore of the *pustular venereal* of Carmichael).—Ultimo in loco est pessimum et valde malignum ulcus, non rotundum, sed varia figura figuratum, ac variis depictum coloribus, livido, purpureo, etc.; callosa habet labra, serpit sævissime, et aliquando nome conjunctam habet, hoc est putredinem (this is the phagedenic ulcer).<sup>2</sup> (G. Fallopi de morbo Gallico tractatus, cap. 82; de tribus cariei gallicæ speciebus.)

Carmichael (an essay on venereal diseases, 2d ed., 8vo., London, 1825), has presented us with an excellent description of *primary venereal ulcers*, and I have adopted his species. Mr. Evans (Path. and Pract. rem. on ulcerations of the genital organs, 8vo., Lond., 1819), has united under the name of *venerola vulgaris* or *ulcus elevatum*, the two first species of Carmichael, (the sore which he believes proper to the *popular venereal disease*, and that which, according to him, precedes the pustular form of the malady), and has contended for the *phagedenic state* being regarded as an evidence or effect of a constitutional taint. M. Desruelles has distinguished venereal ulcers into *simple and complicated*; he thinks that the differences observed in their appearance are due to diversity of seat, and to merely accidental circumstances. Hennen (Principles of Military Surgery, 3d ed. 8vo., Lond., 1819), is also of opinion that the different appearances presented by venereal ulcers, are owing to their variety of situation, on the outer or on the inner surface of the prepuce, behind the corona glandis, on the frenum and on the body of the glans. Boyer distinguishes venereal ulcers into benign and malignant; the latter comprehend—1st, the *callous chancre*; 2d, the *gangrenous ulcer*; and 3d, the *ulcer* which has a fungous and cancerous appearance.

<sup>1</sup> These sores are indicated by Fallopius under the name of *cariei benigna*. Of late Carmichael has described two appearances as characteristic of ulcers proper to two distinct forms of lues venerea—the *popular* and *pustular*. Mr. Evans speaks of them under the title of *venerola vulgaris*. Carmichael has published several cases of these sores in the Lond. Med. Gaz.

point attains the dimensions of a large hemp seed, and acquires the form of a small, slightly excavated ulcer. Its bottom is covered with a yellowish-white, very adherent substance; its edges slightly inflamed, not prominent, are neither hard nor callous, and its base is not indurated. When several of these little ulcers are in contact by their corresponding edges, they run together, and a broader and frequently irregular pitted ulcer, with the same general characters, is the consequence. When they appear near the origin of the frenum, if this part is accidentally torn, they spread in the direction of the rent, so as to form a slight superficial furrow, the bottom of which is covered with a yellowish-white substance. These little sores occasionally form a kind of ring around the outer opening of the prepuce, and if they chance to run together, a succession of ulcerated arcs or portions of circles succeeds. Sores of this description are occasionally evolved in succession during the course of the week following the appearance of those first developed. *Second period* (*excavated state, without false membrane*). Towards the end of the second, or beginning of the third week, and occasionally even sooner, the bottom of the ulcer rises, the edges, that were slightly swollen, sink, and cicatrization is completed in the course of the fourth week, under the influence of the antiphlogistic plan of treatment, without other assistance than the application of the nitrate of silver to those sores whose granulations shoot beyond the level of the general surface.

The appearance and the course of these *benign ulcers* may be modified by neglect of cleanliness, by fatigue of body, the application of irritating dressings, &c. Their surface then becomes dusky, and apt to bleed, their edges are hard and prominent, and the period of their cicatrization is longer of arriving. The mean duration of the ulcers of this class varies between three and six weeks; but this, too, may be modified by the state of the constitution, the manner of living, &c. The ulcerative process and the extension of the inflamed areola appear to stop as soon as granulations begin to be formed.

These sores are frequently accompanied with blennorrhœa of the glans, with urethral gonorrhœa, and with phimosis. They have also been seen accidentally complicated with gangrene or with phlegmon of the prepuce.

814. These ulcers may be caused by the matter of gonorrhœa, and the fluid they secrete has the power of reproducing them.<sup>2</sup>

815. I have seen this variety of venereal sore appearing on the inner surface of the prepuce under the guise of two small eminences covered with a layer of yellowish and very adherent matter, and bathed with pus. These projections, when they had lost this pseudo-membranous covering, at a later period, presented the fungous appearance of which I have spoken above.

816. I have observed every variety of venereal eruption and venereal growth as consequences of these two varieties of primary sore. Carmichael believes that nodes occur very rarely after them.<sup>3</sup>

817. Simple venereal ulcers occasionally present yet another appearance: after the detachment of the layer of grayish adherent matter observed on their surface during the first period, they sometimes assume a reddish-brown hue, and their edges become prominent and sharp. Sores of this kind are not excavated out of the glans or prepuce, like the Hunterian chancre; their bottom, on the contrary, is on a level with the surrounding parts, or is even raised above them.

This peculiar appearance of the simple ulcer is commonly seen when the outer surface of the prepuce, or body of the penis, is the part affected. Several of these sores frequently form a circle around the orifice of the prepuce; and after they get well, are often followed by a phimosis which is only remediable by the operation.

The progress of these simple raised sores is generally slow; they seldom show any disposition to extend superficially or to penetrate

<sup>2</sup> Two men visit the same woman labouring under gonorrhœa; one of them contracts clap, the other *venerola vulgaris*—Evans. Three experiments of this gentleman go to prove that the matter of these sores is more contagious when they are in their first stage, in the excavated state, than afterwards when the discharge from them is purulent.

<sup>3</sup> In a thousand cases of *popular venereal disease*, Carmichael assures us he had not met with a single instance of well-marked exostosis, nor any of those deeper affections which are so common in the other forms of venereal disease. The results of my observations differ from those of Carmichael. I have several times seen exostosis following ulcers of the description in question.



deeper. They vary in size from that of a split pea to that of a shilling. The elevation of their edges gives them an excavated appearance, which they exhibit for two, three, four, and even a greater number of weeks. This elevation of their edges distinguishes them from simple ulcers of corona glandis, which commonly heal up without presenting this kind of circular swelling. These ulcers with raised edges never have the smooth and prominent surface peculiar to the fungous sore. They are distinguished from the *indurated* ulcer (Hunterian chancre) by the want of the callous edge, and base of cartilaginous hardness. They differ from the phagedenic ulcer in having a well-defined margin, and a surface which is not irregular, and as it were eroded, as well as by being unaccompanied with the acute pain that always attends the progress of the eating ulcer.

The mean duration of ulcers with *prominent* edges is greater than that of the simple sores which do not become fungous, and the edges of which do not get separated from the subjacent parts, which are commonly seen on the corona glandis. I have observed every variety of venereal eruption after these ulcers with prominent edges.<sup>1</sup>

818. The antiphlogistic mode of treatment is applicable in the majority of cases of *simple* venereal ulcer. Under the combined influence of rest, especially of rest in bed, low diet, the tepid bath, emollient topical applications, and bleeding when the inflammation runs high, these ulcers always improve, and commonly heal up entirely within from twenty to thirty days. By touching the fungous sore with sulphate of copper, its cure is often expedited. Sores of the body of the penis are frequently found to heal more rapidly when they are dressed during their second period with the unguent. *oxidi zinci*, or of the hydrarg. *nitratum*. In this stage I am also of opinion that alterative doses of one of the preparations of mercury, and purgatives generally prove useful. Carmichael in addition recommends antimonials.

Carmichael tells us that he has used caustic with success to the simple sore in its excavated state. B. Bell was of opinion that this practice was apt to cause buboes.

819. The cicatrices of primary venereal ulcers of the organs of generation are generally small, slightly depressed, of a bluish-white colour, and frequently numerous on the corona glandis. Save in those cases in which the frenum is destroyed, they do not occasion any evident deformity. Previously to complete cicatrization, the neighbouring parts, and the prepuce especially, continue puffy and enlarged, often for a very considerable length of time, but those livid indurations are never seen under the cicatrices which are occasionally observed after *indurated* ulcers.

820. The *indurated syphilitic ulcer*,<sup>2</sup> the *Hunterian chancre*. This form of sore occurs much more rarely than the *simple* venereal ulcer. It is commonly seen on the glans penis. It is constantly circular in a greater or less degree in its form, excavated, without granulations, and covered with a whitish adhering matter. Its base is callous, its edges hard and thick. This hardness and thickening are primary, very accurately circumscribed, end suddenly, and do not blend with, or melt gradually into, the surrounding parts. This character of induration is not limited to the edges of the ulcer in question, but extends over the whole surface of the sore, and frequently spreads beyond it. Ulcers or chancres of this kind are often seen, the extent of whose ulcerated surface is trifling in comparison with that of the induration.

<sup>1</sup> According to Carmichael this kind of ulcer must be very different from the first variety; he adds, that in every case of the second variety to which he could attach constitutional symptoms, they were essentially different from those that followed the first. He relates several interesting cases: Case 9th, ulcer with raised edges on the outer surface of the prepuce; ulcerated bubo with raised edges; phlyzacious pustules.—Case 10. Body of the penis encircled by a series of ulcers with raised edges; an ulcer on the external surface of the prepuce; five weeks afterwards, phlyzacious pustules, and a hard and indolent bubo.—Case 11. Ulcer extending from the back of the penis to the pubes, with raised edges, covered with a thick and adhering matter; seven weeks afterwards, eruption of phlyzacious pustules, pain, ulcers of the throat, &c.

<sup>2</sup> John Hunter is generally supposed to have fixed the characters of this ulcer; but they had been described with great exactness long before: "Interdum in virgâ, nonnulla ulcera cum duritie et callositate que sanari exacte nequeunt, perpetiuntur, quod morbi gallici certum signum est, maxime vero cum in inguine præcesserit apostema, quod bubonem dicunt." (Aloysii Loberæ, de morbo gallico, tractatus.) Massa had equally well indicated this character: "Ulcerâ virgæ quæ sunt mala cum duritie callosâ" (Aphrodisiacus, p. 46). Still John Hunter has particularly insisted upon the circumscribed hardness of the edges and of the base of this ulcer, the characters of which he has well described. (On the Venereal Disease, 4to. London, 1786.)

Carmichael informs us that he has met with *primary indurated tubercles* without ulceration; this form of primary syphilitic affection is exceedingly rare: by questioning patients we almost invariably discover that a small sore had been formerly situated in the same place as the induration, and that it had only healed up within a few days.

821. When the *indurated chancre* is developed on the body of the penis; the ulcer is not in general excavated; it is of a dusky or livid colour; its bottom is on a level with the surrounding parts; its edges and base are always less hard, less callous than those of the same description of sore evolved upon the glans. The size of this ulcer occurring on the body of the penis varies from that of a sixpenny to that of a half-crown piece, or rather less; the sore, indeed, has been seen extending completely round the member. Its edges are but slightly raised; the induration of its base is easily recognizable by the touch, but is never so strongly marked as in the *indurated ulcer* of the glans.

822. Phymosis and inflammation of the prepuce complicate the *indurated* sore or chancre more rarely than the other forms of ulcer; and when this complication does occur it is almost always owing to some accidental circumstance.

823. The duration of the *indurated ulcer* is on an average from five to six weeks. After the first inflammatory symptoms have subsided, the administration of mercury causes this ulcer rapidly to assume a favourable appearance. When this medicine is not employed, the livid tint of the ulcer often alternates with a slight tawny colour; the induration of the base obviously increases, and the ulcerative process commences anew. The *indurated ulcer* or Hunterian chancre, however, gets well locally without mercury. This ulcer often leaves a circumscribed callous and livid induration behind it, which was particularly noted by the writers of the sixteenth century.<sup>3</sup> After getting completely well, this sore is generally followed by a broad and deep cicatrix, which on the glans is commonly single.

824. This variety of ulcer is usually readily distinguished. Simple sores, after being repeatedly irritated, may indeed present, accidentally, some degree of swelling, and a slight induration in their circumference; but this induration does not convey to the same amount the sensation of positive hardness which is perceived when the edges and base of the Hunterian chancre are touched. Farther, this accidental induration of simple sores does not end abruptly at their circumference as in the *indurated ulcer*, but is lost gradually and imperceptibly amidst the surrounding parts.

The *indurated ulcer* differs from those of a phagedenic and gangrenous character, not only in its appearance, but in being for the most part free from pain, and in the slowness with which it spreads. And yet, when the *indurated ulcer* has spread over a considerable extent of surface, and it is situated on the body of the penis, its livid and dusky appearance bears some analogy to that of the phagedenic ulcer; it may, however, be distinguished from this last by its elevated edge and the hardness of its base. The progress of the *indurated ulcer*, moreover, is, as I have said, slow, and within a few days acquires a tawny aspect. In the gangrenous syphilitic ulcer, again, eschars are continually formed until the part affected is destroyed.

825. Syphilitic eruptions of the skin are more frequently observed after the *indurated ulcer* or Hunterian chancre, than after any other primary symptom; they occasionally even make their appearance during its existence.<sup>4</sup> Carmichael tells us that he has never seen any other than *exanthematous* and squamous eruptions succeeding this form of sore; I have seen eruptions possessing various other elementary forms, and tubercles perhaps oftener than any other.

826. Consecutive ulcers also occasionally show themselves in the mouth, on the velum palati, &c. Periostoses and exostoses, too, may follow the *indurated ulcer*, events which are very often preceded by an obvious derangement of the constitution.

827. The *phagedenic syphilitic ulcer*.<sup>5</sup> I have never had an oppor-

<sup>3</sup> "Callosa cicatrix...mobilis loco, crassa, livida, dura, et rotunda...aliquando quidem veluti nervus post cariem remaneat qui durus per pudendum percurrat... Symptomata nondum curati morbi gallici." (G. Fallopiæ. De cicatrice callosâ, cap. 87.—Aphrodisiacus, p. 816.)

<sup>4</sup> Carmichael. Op. cit., case xlix. "Phymosis, discharge under the prepuce; ulcer of the size of a bean, of a livid colour, with callous and slightly raised edges, situated on the body of the penis; syphilitic exanthema during its continuance" (Roseola annulata). I have observed several analogous cases.

<sup>5</sup> Fallopius has clearly described this ulcer, § 788.—Torrella also distinguishes it



tunity of seeing this ulcer in its earliest stage, and I do not know whether it begins in the shape of a solid elevation, of a vesicle, or of a pustule, or whether or not it passes immediately into the phagedenic state. Carmichael states that he has seen a great number of phagedenic ulcers, and assures us that in two or three cases, these sores, before acquiring the decidedly phagedenic character, were *excavated* and covered with a white adhering film.

The phagedenic ulcer has an eroded aspect; its surface presents no granulations, and the soft parts that surround it are not callous nor indurated. It sometimes spreads with great rapidity, and commits much havoc in the space of a few days. At other times it creeps slowly onwards, healing even on one side and advancing on another. It most frequently attacks the penis first, but as regularly spreads to the prepuce, which it often destroys entirely; and it may continue its ravages until the whole of the glans has fallen; when this happens, the ulcer commonly stops suddenly and makes no further progress. The occurrence of hemorrhage occasionally brings about a favourable change, and the bleeding in this case is sometimes so profuse as to soak the linen and bedding of the patient; Carmichael was on one occasion compelled to pass a ligature around a vessel which had been eroded. In some rare cases the destructive process has not stopped until the whole of the penis was destroyed.

According to Carmichael this ulcer has one very peculiar character; it is that of its frequent occurrence upon parts which it has primarily affected, but which it had not destroyed completely.

828. The *phagedenic* syphilitic ulcer may be readily distinguished from all the others of this class. It presents the phagedenic character at so early a stage, that this circumstance ought to suffice for its distinction from the other ulcers which become phagedenic *accidentally*, which they do most generally from excessive stimulation. These sores thus *rendered* phagedenic are much more common than the sore that is primarily so. M. Desruelles<sup>1</sup> has given a particular account of its characters: "From the time," says he, "that a common sore passes into the phagedenic state, the patient feels uneasy; his skin becomes hot and dry; his pulse is sharp and frequent; he complains of thirst; his tongue is red towards the point; the sore is affected with a sensation of intolerable heat and itchiness, succeeded before long by one of burning pain, as if a lighted coal were applied to the ulcer; shooting twinges are further felt from time to time, as if a sharp and burning body were passing rapidly through it. These painful sensations extend to the penis; the edges of the sore swell; an intense degree of redness extends widely around it; the bottom is covered with a grayish or blackish, uneven and very adhering membrane; the ulcer extends both in breadth and depth. These phagedenic ulcers destroy the glans and frenum with rapidity; they have been observed to destroy the penis by layers as it were; their progress is announced by the formation of a grayish or blackish false membrane, or of a putrescent layer, which is observed each time the sore is dressed, and which is renewed repeatedly; the patient then loses his appetite, his countenance changes, &c. &c." With phagedenic ulcers of this kind, the phagedenic sore described by Welbank must be assimilated.<sup>2</sup>

The *phagedenic* differs from the *indurated* ulcer in its external characters, and also in the circumstance that far from being improved like the latter by the administration of mercury, it is, on the contrary, made

from other venereal ulcers. "Ulcers virulenta a corrosivis non differunt nisi secundum magis et minus.... et si talis corrosio non multum profundetur, tunc tale ulcus dicitur *ambulationna* (Aphrodisiacus, p. 536. Torella. *De ulceribus in pudendagra*)—George Sydenham describes *phagedenic* syphilitic ulcers, (*Epistola ii. responsoria* v. i. p. 207.) but these are consecutive ulcers. Carmichael has given a very good description of the phagedenic ulcer. Evans, with many other pathologists, has considered the *phagedenic* and gangrenous character of venereal ulcers as connected with a peculiar morbid state of the constitution. According to him, this constitutional derangement is of two kinds: 1st. A febrile state, or at least a pulse both hard and full, without any remarkable frequency. 2d. An anadynamic state. These two states may exist in the same patient at different periods of the disease. Evans relates two cases which prove that phagedenic and gangrenous ulcers may be communicated by connection with persons only affected with simple ulcers of the genitals. (J. Evans, *Pathological Remarks on ulcerations of the genital organs: appendix on phagedæna and sloughing*, 8vo. London, 1819. Case 3d, p. 124.)

<sup>1</sup> Desruelles. *Seconde mémoire sur les maladies vénériennes* (Recueil des mémoires de méd. chir. et phar. milit., t. xxvii. p. 165).—*Ibid.*, t. xxv. p. 99.—Obs. d'un ulcère situé sur le prépuce, devenu phagédénique sous l'influence du mercure.—Lagneau, exposé des sympt. de la maladie vénérienne, 8vo. Paris, 1818, 5e ed. pp. 96-98. Obs. d'un ulcère simple devenu phagédénique par un traitement local excitant.

<sup>2</sup> Welbank, on sloughing phagedæna. (Med. Chir. Transact., vol. xi. p. 361.)

worse and more rebellious by such a plan of treatment. The phagedenic differs from the *gangrenous* syphilitic ulcer in this, that the destruction of parts is not accomplished as in the latter, alternately, by gangrene and erosion, but always in the latter mode. Phagedenic sores, however, may *accidentally* become gangrenous,<sup>3</sup> and present the twofold mode of destroying parts mentioned.

829. Carmichael conceives that buboes are more infrequent after the phagedenic than after any other form of syphilitic ulcer; and he adds, that the buboes which do occur in its train, have their edges loosened<sup>4</sup> and irregular, and that they can only be healed up after being pared off or destroyed by caustic.

830. Every form of secondary symptom, and every variety of cutaneous eruption are observed to follow the phagedenic ulcer,<sup>5</sup> but I have not had an opportunity of witnessing a sufficiently great number of cases of this kind of sore, nor of eruptions following in its train, to condescend upon any statement of their relative frequency; the whole of the published data, indeed, up to the present day, are inadequate to furnish grounds for such a computation.

831. Carmichael inclines to believe that it would be advantageous to touch phagedenic ulcers with caustic at their very outset. Whether this practice has been enforced or not, recourse must afterwards be had to the antiphlogistic treatment: rest in bed, emollient cataplasms, soothing and narcotic lotions, local or even general blood-letting in proportion to the degree of pain, inflammation and fever, the warm bath, &c. Antimonial medicines, in nauseating doses, have also been recommended by Carmichael, according to whom the scarification of the edges of the ulcer occasionally affords great relief. M. Desruelles has sometimes obtained the same good effects by applying leeches upon the middle of the ulcer. At a subsequent period, when the part affected is no longer painful, when the sore, though it may be spreading in one place, shows a tendency to cicatrize in another, its surface may be advantageously touched with a solution of the nitrate of silver. When any bands extend from one part of the ulcer to another these must be destroyed.

832. After their cure, phagedenic ulcers always leave broad and deep cicatrices behind them. They rarely get well before the end of the second month, and the treatment may even extend over the fifth month.

Phagedenic and gangrenous ulcers are the great causes of those deformities and mutilations of the external organs of generation oftentimes observed after syphilitic affections. The glans and prepuce are sometimes seen eroded in the most singular manner, and are occasionally destroyed altogether. When this has happened, a small tubercle, which marks the orifice of the urethra, is seen upon the extremity of the stump. The external organs in women, after having been affected with ulcers of the same description, also present unseemly cicatrices which furrow or pucker the surface of the labia majora. The irregular, eroded and deep appearance of the cicatrices distinguishes them from those left by the other varieties of primary syphilitic ulcer.

833. When a phagedenic sore is accompanied or followed by syphilitic eruptions or secondary syphilitic ulcers, mercury must never be used till all febrile symptoms have subsided, which is announced by the desquamation of several of the patches or tubercles.

834. The *gangrenous syphilitic ulcer*.<sup>6</sup>—This ulcer is still more

<sup>3</sup> Carmichael. Case 36. Phagedenic and gangrenous ulcers; consecutive ulcers on the abdomen.—Case 42. Phagedenic and gangrenous ulcer; scabs on the thighs and head; ulcers on the lip.

<sup>4</sup> Carmichael. Case 17. Phagedenic ulcer and bubo.

<sup>5</sup> Carmichael. Case 21. Phagedenic ulcer followed by thickening of the perios-teum.—Case 23. Phagedenic ulcers followed by prominent scabby ulcerations.—Case 24. Phagedenic ulcers followed by ulcers on the forehead.—Case 25. Phagedenic ulcers followed by pustules on the face and body, with ulcer of the velum palati.—Case 28. Phagedenic ulcers followed by pains in the joints, by a large tubercle, and ulcerations.—Obs. 29. Phagedenic ulcers followed by pustules, scabs, and swelling of the testis.—Obs. 30. Phagedenic ulcers followed by pustules and scabs.

<sup>6</sup> Celsus (*De re medicâ*, lib. vi. sect. xviii. p. 4) and Paulus Ægineta (*De re medicâ*, lib. vi. 57) have described a gangrenous ulcer of the penis, but they do not say that this ulcer arises from infection, that it is contagious or followed by secondary symptoms. The bishop Palladius, who lived in the fifth century, relates that a hermit, named Heron, after an habitual intercourse with a dancing girl, was attacked with a carbuncle (anthrax) upon the glans. G. Torella, in a chapter, *De ulceribus putridis*, describes the gangrenous syphilitic ulcer. (*De ulceribus in pudendagra tractatus*.)

Swediaur assures us that a gangrenous affection has been observed in the north of the United States, which attacks the virile member and makes rapid progress.



destructive and serious than the phagedenic; it is very seldom that we have occasion to observe its commencement. The first symptoms are attended with so little pain that the patient pays little or no attention to them. According to Carmichael, a small black spot, very similar to a lead drop, both in size and colour, is the first indication of this ulcer. The practised eye detects a small gangrenous eschar in this state. This continues to enlarge on the succeeding days, and occasionally attains three or four times its original dimensions before a line of separation is established between the sphacelated and living parts. When the line of demarkation is formed, we do not find under the slough, as in simple gangrene, a granulating ulcer of good appearance, but a gnawing phagedenic sore, which commences the work of destruction in another manner, and possesses all the virulence, if not, perchance, all the rapidity of the gangrenous process which preceded its formation. Some days afterwards the affected parts are attacked with acute pain, become of a bluish colour, and within a day or two are again covered with a new eschar. In this way, by a succession of eschars and erosive processes, the disease often continues to extend until the whole penis, scrotum, pubes, and perineum, are destroyed or denuded in the male, the labia majora, orifice of the vagina, skin of the perineum, verge of the anus and sides of the buttocks in the female. The pulse under these circumstances generally beats from 100 to 130 in a minute, and when the ulcers are extensive the tongue is dry, brown, and even black, as it is in the advanced stages of severe dothinerteritic affection.

Should the *gangrenous syphilitic* sore have been happily arrested in its progress, and a portion only of the penis been destroyed, particular attention is required to keep the orifice of the urethra sufficiently pervious after the cicatrization of the sore; for without this it is very apt to be left so much contracted as to oppose a great obstacle to the free evacuation of the bladder.

835. It is of importance to distinguish this gangrenous syphilitic ulcer from the gangrene which occasionally happens to the glans in consequence of a paraphymosis.<sup>1</sup> It is also essential to distinguish the syphilitic ulcer, primarily gangrenous, from the gangrenous state which occasionally and accidentally complicates different other ulcers of venereal origin.<sup>2</sup> In the first case, a phagedenic sore is seen which advances by eroding, and causing eschars so long as the specific cause of the disease exists, whilst in the second, the sore is observed to be covered with granulations as soon as the eschar is thrown off. This specific gangrene must also be carefully distinguished from the simple gangrene with which the genital parts of young girls are occasionally attacked.

836. When the syphilitic gangrenous ulcer has made considerable progress, the prognosis is very unfavourable. If one-half of the penis be already destroyed, the most skilful treatment seldom succeeds in arresting the destructive process and saving the remainder of the member; but if a portion of the prepuce or of the glands only be affected, we may hope, with judicious measures, to arrest the further progress of the mischief. An excellent stimulating application under these circumstances is Venice turpentine or balsam of copaiba, mixed with two parts of olive oil, according to Carmichael, who has often seen very extensive ulcers of the penis and integuments of the groin, which were extending rapidly, checked by one or other of these applications, and made to assume a granulating and healthy appearance under its continued use. The same writer informs us that no advantage is to be derived from the application of emollient cataplasms to these ulcers. When the eschars were considerable, terebinthinate applications, or a lotion consisting of one part of tincture of myrrh, and seven parts of camphor mixture, was employed with excellent effect in destroying the fetor of the eschars and in favouring their detachment; but unfortunately these measures do not hinder their production. Change of air and residence in the country were followed

in every case by the happiest consequences, and so intimately convinced is the author I am quoting of the utility of this measure, that his first advice to invalids is usually to get into the country.

He has never seen any advantage from the administration of bark; on the contrary, he has observed the sores rather to spread more rapidly than before. Opium and conium in large doses seemed to produce good effects. Mercurials in every shape are injurious during the whole of the gangrenous period. When the ulcer is healing, however, recourse must be had to them in order to modify the constitution.

837. Secondary syphilitic symptoms, and particularly cutaneous eruptions are very frequently observed to follow the gangrenous primary sore; this, indeed, is one of the principal characters of this ulcer.<sup>3</sup>

838. The *degenerated syphilitic ulcer* (the *cancerous syphilitic ulcer* of some writers).<sup>4</sup> This ulcer is not primary; it is a mere degeneration of some other, and particularly of the *simple* and of the *indurated* ulcer, upon which fungous excrescences have made their appearance. The patient then suffers very severe pain; the part affected swells enormously; the glans is destroyed by the progress of the ulcer, and the penis presents the appearance of a kind of cauliflower, flattened and attached to the pubes.

839. These *degenerated* syphilitic ulcers must be distinguished from the *primary* sores of the penis which begin in the form of small flat tubercles, not painful at first, and which may become ulcerated shortly after sexual intercourse. This distinction, which positive information in regard to the circumstances that preceded the appearance of the ulcer, on the form and aspect which it presented in its earliest stages, occasionally enable us to make, is of so much the more importance as mercurial preparations, mentioned by some practitioners as the touch-stone, are generally injurious in cases of cancerous disease.

840. It is commonly agreed that the general and local abstraction of blood, the exhibition of opium both internally and to the parts affected, emollient topical applications, the tepid bath and the antiphlogistic regimen are the means best adapted to check the progress of this species of ulcer.

Some surgeons imagine, and I am of their opinion, that independently of this antiphlogistic treatment, it is often advisable to take away the fungous surface of this description of ulcer, and that there are cases in which it is even proper to remove the whole of the diseased parts with the knife.<sup>5</sup>

Should there be any symptoms at the same time of general infection, it would be necessary to attempt a modification of the constitution by the administration of alterative doses of the blue pill, &c.

These degenerated syphilitic ulcers, happily of rare occurrence, are frequently fatal. I am not aware that any secondary syphilitic symptoms have been observed after their cure.

841. *Syphilitic Bubo*.—A bubo is a tumour, developed in the inguinal region, and accompanied with a greater or less amount of

<sup>3</sup> Carmichael: obs. xxvi. Ulcer of the body of the penis, of a gangrenous appearance, followed by an ulcer on the upper lip, pains in the joints, flat coppery tubercles.—Obs. iii. Phaged. ulcer of the gland ready to become gangrenous, followed by a superficial ulcer of the pharynx and with thickening of the periosteum.

<sup>4</sup> The following case is from the work of M. Lagneau. "H. portait depuis quelque temps un chancre superficiel, qui avait résisté à l'emploi des topiques émoulliens. Il consulta un chirurgien, qui lui prescrivit des frictions mercurielles et cautérisa l'ulcère avec le vitriol bleu et la pierre infernale. Ce traitement étant sans succès, un second médecin fut appelé: il ordonna un pansement tout aussi peu rationnel avec l'eau phagédénique, et le malade ajoutait encore à ces mauvais effets en cautérisant lui-même son chancre avec le vitriol bleu. Dès-lors l'ulcère prit un mauvais caractère, devint rongeur et couvrit bientôt tout le gland, dont le volume s'était énormément accru; il rendait un ichor fétide et les bords en étaient renversés. Le malade entra dans cet état à l'hospice des vénériens, où il fut pansé avec les émoulliens et les calmans. Mais le mal était trop avancé pour qu'on en obtint la guérison; il se développa une tumeur lymphatique dure et indolente à la base de la verge, laquelle jointe à un engorgement semblable de l'un des cordons spermatiques vint contrarier l'amputation de l'organe déjà projetée." Lagneau, op. cit., p. 96.

I have also seen a case of cancer of the prepuce, with enlargements of the glands of the groin, which had followed an ulcer of the glans, which had been considered and treated as syphilitic; amputation was not had recourse to, and the patient died. M. Devergie has related several cases of venereal ulcers which had become cancerous after a stimulating plan of treatment. (Clinique de la maladie syphilitique. Paris, 4to, 1826, p. 88, et sequent.)

<sup>5</sup> M. Devergie relates three cases of these degenerated ulcers, in which amputation was performed either by himself, M. Boyer, or M. Gilbert.

Hunter has described the mortification produced by paraphymosis. Swediaur has noticed that gangrene appeared sometimes in the genitals of individuals, who, being attacked with gonorrhœa, took the putrid fever.

Carmichael, op. cit., p. 291, (phaged. vener. disease, or sloughing ulcer,) gives a good description of the syphilitic gangrenous ulcer.

<sup>1</sup> M. Desruelles has related a remarkable example of it: Mem. de Méd. Chir. et Pharm. Militaire, t. xxv. pp. 208-162.

<sup>2</sup> The gangrenous ulcer shows itself in those who have been under a course of mercury for several weeks. (Carmichael. Op. cit., obs. xv. xvi.)



pain, after impure sexual intercourse. These tumours most generally accompany or follow other primary syphilitic symptoms; but there are cases on record, the accuracy of which is unquestionable, which prove that buboes may make their appearance as primary symptoms of venereal infection.<sup>1</sup> (a)

842. This species of bubo differs from the inflammatory and sympathetic enlargement of the lymphatic glands of the groins, observed in some cases of gonorrhœa, in the circumstance of the latter usually becoming resolved, and not giving rise, like the former, to venereal ulcers after ending in suppuration, which is their usual termination. It must also be distinguished from the adventitious inflammation of the lymphatic glands of the groin produced by a blow, or violence of any kind, by the inflammation of a toe, by a wound or ulcer, a boil or a carbuncle on the leg or thigh, an abscess in the plevi, &c. In conclusion, it is easy to distinguish the syphilitic bubo from the gangrenous bubo of plague, from those inflammations of the glands of the groin which are occasionally observed in women who have just lain in, in individuals attacked with Barbadoes leg, or in scrofulous subjects.

843. Syphilitic buboes, in their earlier stages, are to be treated upon the antiphlogistic system generally, and by means of the topical application of ice; when matter is formed, they ought to be opened early; after the cessation of inflammatory symptoms, mercurial preparations become extremely useful. (b)

844. Cases of primary bubo are of such rare occurrence, that opportunities have still been wanting, duly to study the form, the frequency and the duration of the syphilitic eruptions and the other secondary symptoms to which they give rise.

845. The venereal poison may be transmitted to nurses by newborn infants labouring under syphilitic sores of the lips and mouth.<sup>2</sup> The local and primary symptoms which are observed around the nipples of nurses infected in this way are almost always ulcers; occasionally, however, flat tubercles are observed around the nipple in these circumstances.

846. New-born infants<sup>3</sup> sometimes present, from the very moment

(a) The test by which to determine the true character of bubo, is stated by M. Ricord to be inoculation. If the bubo be venereal, the pus in it will give rise to chancre and its sequences; but otherwise not.

(b) A succession of blisters with intervening dressings of lint moistened with a solution of bichloride of mercury, and then a simple poultice or cooling lotion, or a solution of opium, is the latest French practice. Both by hospital and army surgeons, it has been found to be very successful.

<sup>1</sup> Fallopius has observed bubo as a primary symptom of venereal affection: Nam solet oriri bubo (Gallicus) absque gonorrhœa et carie (Gabrielis Fallopii de morbo gallico tractatus, cap. 90. De bubone gallico.—Aphrodisiacus, t. ii. p. 819, in-fol. Lugduni Batavorum). Massa had already mentioned consecutive bubo. (Et sequitur apostemata inguinum.—Aphrodisiacus, p. 146.)

We have often seen, says Mr. Desruelles, inflammation of the glands in men who had neither at the time nor previously laboured under any other venereal symptom. In this case the inflammation of the glands does not usually show itself till a somewhat remote period from the date of infection. The shortest period I have known for the incubation of bubo is from eight to ten days, and the longest from thirty-five to forty days. (Second memoir, loc. cit. p. 274.) I have myself observed several examples of these primary venereal buboes. If patients be not carefully questioned, one might imagine them to be much less frequent than they really are, for patients often present themselves for the treatment of a bubo after the cure of a simple syphilitic ulcer.

<sup>2</sup> "Videmus plures infantulos lactantes, tali morbo (gallico) infectos, plures nutrices infecisse. (Jacobi Catanei de morbo gallico tractatus, cap. iii.—Forestus. De lue venerea, lib. xxxii. obs. ii.—Hunter, op. cit. p. 413.)

<sup>3</sup> Schenck quotes the case of a woman whose husband was attacked with syphilis, and who was delivered of a child covered with scabby sores. (Obs. medic. lib. vi. De lue venerea, ibid. vi. obs. 5.) Rosen speaks of a child which came into the world entirely covered with ulcers and scabby pustules. The father had died several months before its birth of an inveterate lues, and the mother also died of the same disease shortly afterwards. (Maladies des Enfants, p. 314.) One of my pupils, M. Desir, delivered a woman of a child whose body was covered with a tubercular syphilitic eruption. Berlinghieri was wrong (Traité de la maladie vénérienne, trad. par Alyon, 8vo., Paris, 1800) in stating that the child had not contracted syphilis before its birth. Doublet says, and with truth, that a child may be born affected with syphilis. Swediaur says that this very rarely occurs; he relates two instances, however. "A woman having apparently been affected by constitutional syphilis which had never been radically cured, gave birth to a child evidently labouring under the symptoms of this disease, which it communicated to its nurse, who was in perfect health (t. ii. p. 9, 116).—A dragoon had a syphilitic ulcer in the throat; in this state he cohabited with his wife; she became pregnant, and was delivered of a child, which showed, some weeks after its birth, a syphilitic ulcer in the same place that had been

of their birth, but more frequently several weeks or some months afterwards, eruptions and other syphilitic symptoms. Among these some may be regarded as contracted by the infant in its passage through the infected genital organs of the mother (of this number are ophthalmia and blennorrhœa of different descriptions); others are evidently the result of a constitutional infection transmitted hereditarily (tubercles, pustules, ulcers, &c.).

847. It is generally thought now that the nurse labouring under a syphilitic affection of the genital organs does not transmit the disease by giving suck, if there be no specific disease of the nipples (Girtanner, Van der Haar, Hunter, &c.); others, however, are of a different opinion.<sup>4</sup>

848. The syphilitic poison is most commonly communicated by sexual relations; but it may be transmitted by the application of the virus to a part that is excoriated, or the epidermis of which is very thin.<sup>5</sup>

849. Syphilis may be transmitted by the inoculation<sup>6</sup> of the matter of primary sores, or if gonorrhœa, by means of one or more punctures with the point of a lancet.

This experiment, however, does not always succeed: Bertin and his colleagues of the Hospice des Vénériens<sup>7</sup> constantly failed in their numerous attempts to produce the symptoms of syphilis, by inoculating the matter of venereal gonorrhœas, of primary chancres, the discharge of the virulent ophthalmia of children, or by placing these matters in contact with the surface of mucous membranes. In contrast with these experiments, which humanity brands as infamous, and no love of science will justify, are to be placed those cases in which medical men, practitioners in midwifery, &c., have accidentally inoculated themselves with syphilis.<sup>8</sup> (a)

850. To conclude, towards the end of the 15th, and beginning of the 16th century, a syphilitic disease appeared as an epidemic in Italy, France, Spain, &c.<sup>9</sup> This disease spread not only in consequence of the intercourse of the sexes, but from simple contact of the person,<sup>10</sup> and even by means of the air, as other contagious epidemic diseases do. Since this epoch epidemics analogous in their nature have been

(a) See the summary of M. Ricord's experiments and observations on this point in a preceding note.

affected in the father (op. cit. t. ii. p. 9).—Mahon admits that children may be born with unequivocal symptoms of syphilis (Considérations sur les symptômes de la maladie syphilitique des enfans nouveau-nés.—Mem. soc. méd. d'émulation, t. ii. 59.—Ibid., t. iii. p. 27). Hunter speaks of a woman covered with venereal pustules, who was delivered of twins, both of whom had pustules on their bodies when born, and who died soon after. (Op. cit. p. 310.)

<sup>4</sup> Potus lactis mala qualitate infecti, dato quod nulla cutanea infectio appareat (Jacob. Cutanei, op. cit. cap. iii). Gardien. Traité d'accouchemens, 8vo. Paris, 1807, t. iv. p. 189.

<sup>5</sup> "Per oscula vero facile recipitur hic affectus, quoniam vibratio illa et linguarum conflictus caliditatem auget; linguæ rarescunt (Brassavola, de morbo gallico liber. Aphrodisiacus, p. 673).—Cullérier, Swediaur, etc., have seen primary venereal inflammations of the navel, of the mouth, of the rectum, ears, etc. Syphilitic eruptions have been known to appear after the transplantation of a tooth. See Hunter (op. cit. p. 418).—On diseases occasioned by transplanting teeth, which have been supposed to be venereal, who, in his remarks on the case related by Watson, seems to me to have made use of little conclusive arguments.—Swediaur (op. cit. lib. ii. p. 16).

<sup>6</sup> A man who had venereal pustules on different parts of the skin, was inoculated in those parts which were exempt, with the matter of a chancre as well as with that of his own ulcers. The wounds which were impregnated with the matter of the chancre, became well characterized chancres, but the others healed up. I have frequently repeated this experiment, and the effects have always been the same. Having inoculated a person with the matter of a true venereal ulcer which appeared upon the tonsil, and with the matter of a gonorrhœa, the matter of the gonorrhœa produced a chancre; that taken from the ulcer of the tonsil had no effect. (Hunter. Op. cit. p. 390.)

<sup>7</sup> Bertin. Traité de la maladie vénérienne chez les enfans nouveau-nés, 8vo. Paris, 1810.—Prem. partie, p. 52-58.

<sup>8</sup> Swediaur. Op. cit. t. ii. pp. 11, 15. A young soldier affected with gonorrhœa inoculated himself accidentally with the matter of the discharge, by touching a slight wound on the chin with his fingers which were soiled with it; shortly after, considerable psudracious syphilitic eruption, beginning on the face and extending over the whole body; two months afterwards, ulceration of the throat, pains, &c. (Delpech. Chir. Clinique, 4to., t. i. p. 335.)

<sup>9</sup> Upon this memorable epidemic, consult the collection published by Ludovico Luvigini: Aphrodisiacus sive de lue venerea, fol. Lugduni Batavorum, 1728, and the supplement given by C. G. Gruner: Aphrodisiacus, sive de lue venerea, in duas partes divisus: quarum una continet ejus vestigia in veterum monumentis obvia; altera quos Aloysius Luisinus temere emisit scriptores, fol. Jenæ, 1789.

<sup>10</sup> "Evenit ei dormiendo in eodem lecto cum fratre suo infecto (Gaspari Torrellæ Consil. quartum).



observed to prevail partially (vide Scherlivo, Morbus Anglicus, &c.); in these the infection was general, and followed by all its effects.

851. In other cases of infection the disease appears to be local, at least in several individuals, and during a certain time. In effect experience has shown that many primary symptoms, particularly blenorrhœa of the glans and gonorrhœa are very seldom followed by general constitutional infection. But on the other hand, the number of cases in which symptoms of general infection have occurred after the cure of primary venereal ulcers, is so considerable, as to prove that the treatment of primary symptoms can only be held as complete when, by its means, the general system is guarded against the liability to secondary contamination. Unfortunately this desirable end has been attained by none of the methods of treatment hitherto pursued; and opinions are even at present very much divided in regard to the efficacy of the mercurial and the non-mercurial treatment, with one or other of which all the rest may be assimilated.<sup>1</sup>

852. *Secondary symptoms.* These symptoms are extremely varied: but I shall confine myself almost exclusively to the consideration of the venereal affections of the skin (syphilides), besides which, we have ulcers of the mouth, throat, nasal fossæ and other parts, affections of the bones and periosteum, of the articulations, of the eye, &c., all of which have peculiar characters.

853. The alterations produced in the integuments by the venereal poison may be classed under one or other of the elementary forms of cutaneous inflammation and its consequences: 1st. *Syphilitic exanthemata*; 2d. *Syph. bullæ*; 3d. *Syph. vesiculæ*; 4th. *Syph. psudracious* and *phlyzacious pustulæ*; 5th. *Syph. papulæ*; 6th. *Syph. squamæ*; 7th. *Syph. maculæ*; 8th. *Syph. tubercula*; 9th. *Syph. secondary cutaneous ulcers*; 10th. *Syph. cutaneous excrescences*; 11th. *Syph. onychia*; 12th. *Syph. alopecia*. These various forms of disease occur at the present day nearly in the following order of relative frequency: Tubercles, squamæ, papulæ, excrescences, exanthemata, secondary cutaneous ulcers, phlyzacious pustules, psudracious pustules; alopecia, onychia, bullæ, vesiculæ. I shall describe them in the order I have followed in treating of the other cutaneous eruptions, and according to which I have named them first.

854. The *syphilida* or *syphilitic cutaneous eruptions*, except in a few exceedingly rare instances, are only observed at the present day after the occurrence of primary symptoms of greater or less severity. During the epidemic of 1495, eruptions on the skin were occasionally the first symptoms of the venereal disease observed.<sup>2</sup> The disease, however,

<sup>1</sup> The objectors to mercury maintain that under the influence of antiphlogistic treatment and non-mercurials, the cure of primary symptoms is more prompt, and the malady thus cured less rarely followed by secondary affections. In aid of this assertion, they quote the account of experiments made in Sweden during five years, upon sixteen thousand nine hundred and eighty-five patients, the result of which showed, that relapses or secondary symptoms occurred in the following proportions: 1st. After the treatment by means of low diet (without mercury) of seven and a half per cent.

2d. After local treatment or other methods (without mercury), of seven per cent.

3d. After mercurial treatment, of fourteen per cent.

4th. After the treatment by cinnabar fumigations, of twenty-two per cent. (Bullet. Univers. de Ferussac, t. xiii. p. 152). M. Desruelles obtained results very similar. To these conclusions I might oppose those come to by Dr. Hennen, a partisan of the non-mercurial treatment, who declares notwithstanding "that secondary symptoms supervene more frequently, and at shorter and more determinate periods, after the treatment without mercury, than when the mercury has been used." But on the other hand he affirms, that after treatment without mercury the secondary eruptions have not been very severe, that they have not ulcerated, that they were easily cured, and that the bones of the nose or other parts were never affected with caries. (Hennen, op. cit. p. 535.) He says, besides, that iritis is more frequent after the non-mercurial treatment, and that in this case mercury may be resorted to with success (p. 555). According to his calculations, of nineteen hundred and forty individuals treated without mercury, ninety-six have had secondary symptoms; about one in twenty, in the interval of nearly two years.—Of twenty-eight hundred and twenty-seven individuals treated with mercury, and who presented a greater proportion of the Hunterian chancre than the preceding number, fifty-one had secondary symptoms; about one in fifty-five (p. 551, and following). With respect to the primary symptoms, the results obtained are similar to those of M. Desruelles. The mean length of the treatment without mercury was 21 days, with mercury 23 days. The results obtained by M. Rose (Trans. of the Med. Chir. Soc., vol viii.) are still more unfavourable to the treatment without mercury; for he assures us that secondary symptoms took place in a third of the cases treated in this manner. In the York hospital and some others, the proportion of individuals presenting secondary symptoms was less unfavourable—one in six; but in all the cases the rarity of affections of the bones and the mildness of the secondary symptoms generally have been remarkable.

<sup>2</sup> Cum multi laborent et laborarunt tali ægritudine (morbo gallico), qui nunquam in virili membro, aut in vulvâ quicquam passi sunt, et nihilominus omnes ferè ægrotabant partes corporis, ut in multis vidi, qui erant infecti ulceribus, doloribus, aposte-

even during this epidemic, very generally showed itself upon the external organs of generation before appearing upon other regions of the body.<sup>3</sup>

855. The title of *incubation* is given to the interval that elapses between the date of infection and the appearance of the eruption, or the attack of fever which in some case precedes its evolution. Syphilida sometimes make their appearance<sup>4</sup> during the continuance or very shortly after the invasion of primary symptoms.

856. Most commonly, however, it is after several months, and even after several years have elapsed from the date of an apparent cure of every primary symptom, that signs of secondary infection, and especially of venereal eruptions, make their appearance. (a) In the epidemic of the 15th and 16th centuries, these eruptions, when they supervened upon local affections of the genital organs, like all the other secondary symptoms, occurred in general much earlier than they do at the present day.<sup>5</sup>

857. Syphilitic eruptions are sometimes preceded by *febrile* symptoms,<sup>6</sup> which often cease as soon as the eruption is accomplished, but which also occasionally continue during a longer or shorter period of time afterwards. Frequently, too, patients complain before these eruptions of nocturnal pains in the bones or joints; they are, farther, very commonly attacked with ulcers in the throat before their appearance. The duration of these precursory symptoms varies from one to two or three weeks or more. A vapour bath or violent exercise seems often to hasten the outbreak of the eruption.

858. Whatever the elementary form of the syphilitic eruption, it very uniformly shows itself upon the external organs of generation, about the verge of the anus, on the face, especially on the forehead and angles of the mouth, on the back, &c. Syphilitic eruptions have a *peculiar colour*, the shades of which vary from a violet red to an earthy yellow,<sup>7</sup> but which is commonly characterized by the general term *coppery*.

859. Syphilitic eruptions are almost always accompanied by different other secondary symptoms; and they occasionally alternate with one or several additional symptoms of venereal infection.

860. Syphilitic eruptions generally display a great tendency to ulceration, which often assumes peculiar characters; this circumstance was observed very long ago.<sup>8</sup>

(a.) The period between the appearance of primary syphilis and the occurrence of secondary disease varies. It may be two weeks; more commonly it is two or three months, and, as stated in the text, even longer. The stationary nature and occasional suspension of all the secondary symptoms are well described by Dr. Colles.—(*Practical Observations on the Venereal Disease and on the Abuse of Mercury*.)

matibus, et pustulis, quorum pudendum nihil patiebatur.—tres hoc anno curavi ego pueros, unum ætate trium annorum, alterum, ætate sex annorum, et erat puella, tertium undecim annorum, isti non sumpserunt lac infectum—neque coiverunt. (Massa. De morbo gallico, cap. ii.)

<sup>3</sup> Morbus gallicus est pustulæ ex varia humorum corruptione generatæ, propter nimiam aëris in calore atque humiditate præsertim intemperiem, pudenda primum, deinde reliquum corporis, cum magno plerumque dolore occupantes. (Leonici. De Epidemia quam Itali morbum gallicum vocant.)

<sup>4</sup> Syphilitic exanthema sometimes occurs during the treatment for chancre. Papulæ and spots are also sometimes formed a short time after the appearance of primary venereal ulcers. The greatest number of syphilitic eruptions show themselves in the two first years which follow the infection.

<sup>5</sup> Nicolaus Minor Valentinus, mihi intimâ caritate conjunctus, ætatis xxiv annorum ferè, mediocris stature, atque habitudinis, complexionis sanguinæ, ad choleram tendentis, de mense Augusti habuit rem cum muliere, habende pudendam; quare eadem die ipse fuit eodem morbo infectus; quæ infectio, incepti apparere in virgâ, ut solet ut plurimum aliis evenire; nam sequenti die apparuit ulcus in virgâ cum quâdam duritie longâ tendente versus inguina ad modum radicum sorditæ et virulentæ. Post sex dies ulcere semicurato, arreptus fuit ab intensissimis doloribus capitis, colli, spatularum, brachiorum, tibiarum, et costarum, et præsertim in eorum musculis, cum maximis vigiliis, a quibus molestabatur, non nisi in nocte, post primum somnum. Elapsis postea X diebus, apparuerunt multæ pustulæ, in capite, facie, collo, etc. (Gasparis Torrellæ Consil. primum.—Aphrodisiacus, p. 546.)

<sup>6</sup> These febrile symptoms were remarked by Massa; "Et aliquando accidit febricula ante adventum cum aliquo dolore capitis vel frontis—fiunt pustulæ et cessant dolores, et aliquando non cessant si materia est plurima. (Massa. De morbo gallico, p. 45, cap. v.) Hecker and Morelli studied syphilitic fever; Carmichael has mentioned it in several cases, and I have myself often observed it.

<sup>7</sup> Attendendo colorem pustularum subalbidum, aliquando subnigram, aliquando aliquali subrubedine. (Aquilanus. (Seb.). De morbo gallico.—Aphrodisiacus p. 3.)

<sup>8</sup> Fuit etiam ab his pustulis et apostematibus, cum rumpuntur, ulcera diversorum generum. In quibus reperiuntur materiæ albæ viscosæ adherentes cum tenacitate. Quæ quidem materiæ in aliis ulceribus non reperiuntur. Et ulcera ista, cum pro-



861. Syphilitic eruptions are almost constantly accompanied with other symptoms of constitutional infection, such as pains in the bones, ulcers in the throat, &c., and they alternate sometimes with other symptoms of lues which cease on their appearance; farther, they are occasionally replaced by diseases of the bones, and different other grave affections; lastly, they now and then disappear for a time on the invasion or during the course of a serious disease, to recur for the most part with greater virulence on the establishment of convalescence.

862. It is difficult, if it be not perchance impossible, to fix the time at which the cure of a venereal eruption can be said to be accomplished: instances of relapse of these eruptions, and of the manifestation of other venereal symptoms are, therefore, of very frequent occurrence.<sup>1</sup> These relapses would be much rarer did not the patients of public hospitals so generally insist on their discharge before having had time to undergo a complete course of treatment, and did not patients in private life so commonly refuse to go on with the treatment prescribed for some time after they are apparently well, in the idle fear of having their constitutions impaired by the continued use of mercurial preparations.

863. The syphilitic *exanthematous* eruption<sup>2</sup> presents three appearances, distinguished from each other by their several colours, into the red, the yellow and the violet. The two first are frequently seen united in the same individual, and then the skin has a peculiar particoloured look, which has been compared to that presented by the surface of certain species of trout (J. L. Petit. Hennen).

The red syphilitic exanthema (*roseola syphilitica*) may be primary and acute, that is to say, it occasionally accompanies primary symptoms, for I have never known it to exist primarily and independently of other symptoms. It often precedes or accompanies other secondary symptoms;<sup>3</sup> but it does not often, as it has been said to do, accompany primary symptoms, and especially gonorrhœa; might I draw an inference from my own observations, I should say that it accompanied gonorrhœa very rarely. I have several times seen it coincide with a considerable eruption of flattish tubercles, this twofold eruption appearing several months after the cure of a chancre. The exanthema in question more rarely exists alone.

The eruption is characterized by spots of a *coppery red*, or of a tint very similar to that of measles. The spots, most generally dissemi-

nated over the trunk and extremities, are irregular, sometimes rounded, but much more commonly without any determinate figure, extremely superficial, not prominent, and disappearing completely under the pressure of the finger. Very conspicuous when patients have just taken active exercise, or when they come out of a vapour bath, they are scarcely visible when patients have been at rest for some hours and the temperature of the surface is low. To distinguish them readily, it is sometimes necessary to place the trunk and parts affected in such a manner as to make the light fall on them obliquely.

These patches very seldom coalesce, and the skin presenting its natural colour in the intervals between them, has a marbled appearance. When these spots are examined narrowly and with great attention, especially those developed upon the outer parts of the thighs, in those places where minute projections are observed at the roots of the hairs, each of them appears to be formed by the aggregation of four or five violet-red coloured points, slightly or not at all prominent, over which is spread a tint of less intensity that vanishes under pressure, exactly like a blotch of measles.

The spots of syphilitic exanthema are not generally attended either with heat or itchiness, although patients do occasionally complain of a slight degree of pruritus. Usually evolved without febrile symptoms, and unknown to patients, these spots often appear in the course of a few hours.

The red tint of the exanthema commonly disappears within a few days; the spots fade, become slightly yellowish,<sup>4</sup> like those of common measles, and remain in this state longer than these last. The desquamation that follows this eruption is extremely insignificant or altogether insensible; a few minute grayish or mealy-looking points are all that are ever seen on the surface of the skin.

864. This syphilitic exanthema is readily distinguished from the other syphilitic eruptions by its form, and from the exanthemata in general by the following character. From measles it differs in the absence of febrile and catarrhal symptoms, the duration of the eruption, etc. This duration of the eruption, and certain other concomitant syphilitic symptoms, also serve to distinguish syphilitic exanthema from roseola. Further, if roseola *vulgaris* and syphilitic roseola present nearly the same outward appearance at first, or during the few first days of their eruption, the red and slightly violet hue of the syphilitic efflorescence is more permanent than that of the common roseola, and is usually succeeded by a yellowish tint at a period when all traces of this less important malady have disappeared. It is still more easy to distinguish syphilitic exanthema from urticaria, in which the wheals are either paler or more rosy than the skin at large, are prominent and accompanied with pruritus of a very severe description, and often appear and disappear spontaneously once or oftener in the course of the four and twenty hours,—so many characters which are never presented by the syphilitic affection.

The small yellow irregular, flimsy and fleeting spots of syphilitic exanthema in its decline, are much slighter than the larger patches of chloasma; they are also in general disseminated over a much greater number of regions. The spots of measles as they are going off bear a pretty strong resemblance to those of the syphilitic exanthema become yellow; but in measles the symptoms which preceded the eruption, and in syphilitic exanthema the concomitant symptoms leave no room for uncertainty in regard to the diagnosis. I shall by and by specify the characters, by means of which syphilitic exanthemata may be distinguished from syphilitic spots or maculæ.

865. As to the *exanthematous* or *erythematous* inflammations of the throat, conjunctiva, prepuce, vagina, &c., of a syphilitic nature, their diagnosis would be attended with insuperable difficulties, were not these affections accompanied with other characteristic phenomena (squamæ, tubercula, ulcers, &c.), and were not their contagious nature unquestionable.

<sup>4</sup> Syphilitic exanthema has sometimes, from its commencement, the yellowish tint which is observed more frequently on the decline of the rosy exanthema. "We have also observed, during the treatment of phagedenic ulcers, an eruption of yellowish spots on the skin. They are neither pustules nor papulæ, since they do not rise above the level of the skin; nor are they coppery spots, having none of the general characters of these, nor are they of so long continuance; the spots of which we speak disappear at the end of ten or fifteen days." (H. M. J. Desruelles. Second mémoire inséré dans le recueil des mémoires de médecine, de chirurgie et de pharmacie militaires, t. xxvii. p. 177.)

longantur, fiunt profunda, virulenta, livida, corrosiva, sordida, cum duritie labiorum et carne ostracosa et aliquando fiunt ambulativa—et aliquando sunt perforata multis perforationibus. (N. Massa. De morbo gallico, cap. v.—Aphrodisiacus, p. 45, folio. Lugduni Batavorum, 1728.)

<sup>1</sup> Et sæpe post curationem hæc ægritudo recidivat et recidiva quandoque est eita et sæpe stat per annos, quæ in multis est deterior. (Massa. Op. cit. p. 45.)

<sup>2</sup> This eruption is described by Torrella, in his Consilium secundum: "Infecta autem virga, post xxx dies, post somnum prolixum horâ tertâ excitans se a somno, invenit totum corpus infectum maculis latis, rubeis, sine pustulis, etc. Fernelus has given its exact characters: (altera species) paulo deterior est quâ cutis universa crebris maculis minimè extuberantibus conspergitur, iisque parvis, lentiginis instar, ac modo rubris, modo flavis, quæ non antè deleri extinguere possunt, quam morbi radix sit evulsa...quam nulla graviora sequuntur incommoda." Fernel. De lue venérâ.—Aphrodisiacus, p. 613.) Hæfenreffer has given this description word for word. Hunter mentions exanthematous spots of a syphilitic nature. Willan, in his article on syphilitic psoriasis gyrata, mentions an exanthematous eruption of an annular form, which shows itself in patches upon the face, the extremities, and other parts of the body; this exanthematous eruption lasts several weeks, or even months, before any desquamation takes place; it is also accompanied with fever, pains in the head, limbs, &c. (Willan on cutaneous diseases. 4to. London, 1778—1814, p. 164.) There are some particular cases in different periodical publications: Syphilitic exanthemateuse guérie par les acides. (Journ. Hebdom. 1re série, t. i. p. 24.) I have seen a great many instances of this affection. Cullérier and his pupils speak of the syphilitic exanthematous eruption under the name of *pustules formées*.

<sup>3</sup> Syphilitic exanthema has often been seen with other secondary symptoms; in fifteen cases of eruptions, without other accompanying symptoms, mentioned by Dr. Hennen, and which made their appearance after Hunterian chancres, six were tubercular, five exanthematous, two pustular, one had something of a tubercular form, another was tubercular and vesicular. Of four cases of eruptions appearing after the same form of sore, and complicated ulcer of the throat, two were tubercular, one tubercular and squamous, and another tubercular and exanthematous. Of twelve eruptions appearing after ulcers, different from those described by Hunter, and without other symptoms, six were pustular, three were exanthematous, two were tubercular, and one tubercular and squamous. In six cases where the eruption was accompanied with ulcers of the throat, three were exanthematous, two tubercular, one papular, squamous and tubercular, and one pustular and tubercular.

Of three hundred cases of syphilitic eruption, after different primary symptoms, I have not observed the exanthematous eruption more than ten times! But this eruption may have been more frequent, as patients would scarcely present themselves at an hospital on account of so slight a symptom.



A *chronic exanthematous sorethroat*<sup>1</sup> is one of the most common of all the constitutional symptoms of syphilis. It differs in its appearance and in several other phenomena from simple or even phagedenic ulceration affecting the pharynx, which is for the most part attended with little difficulty in swallowing, whilst this symptom is always very decided in the syphilitic affection of the same parts. When the inside of the throat, and especially the posterior part of the pharynx and uvula are examined, these parts are generally observed to be red and swollen. The tonsils are occasionally a little enlarged, and the same may be said of the submaxillary glands. This tumefaction of the glands, which is in general accompanied with little pain, has been confounded with scrofulous swellings of these structures. Hunter is of opinion that this erythematous inflammation may be propagated along the œsophagus. The affection is analogous in its nature to chronic venereal ophthalmia.

The exanthematous is justly regarded as the least serious of all the forms of syphilitic eruption.

866. *Maculæ syphiliticæ*, *syphilitic spots*,<sup>2</sup> are occasionally observed on the trunk and extremities, but are much more commonly seen on the face, and especially on the forehead. These maculæ are rounded or oval in their figure, and vary in size, from that of a shilling or something less, to that of a half crown piece. They are of a very deep yellow coppery colour, their centres often darker than their circumferences, and disappear in some measure, but always imperfectly, under the pressure of the finger. They are occasionally accompanied with some pruritus. In general they are few in number; and they rarely become affected with evident desquamation. In the aged, and individuals of cachectic constitution, these maculæ are sometimes seen of a deep brown, and even of a blackish hue.

The duration of primary syphilitic maculæ, always less protracted than that of the stains which are consecutive to other elementary forms of eruption, especially when these have been followed by ulceration, is at all times difficult to calculate, and varies between one and several months. They generally get well from the circumference towards the centre, assuming the pale yellow colour of withered leaves.

867. These syphilitic maculæ are distinguished from chloasma by the small size and regular form of the spots, which in chloasma are always extensive and regular; the patches of chloasma further appear most commonly on the fore part of the breast and abdomen, and are never of a reddish-yellow or copper colour. They are also occasionally attended with a considerable degree of pruritus, and almost always affected with an evident furfuraceous desquamation. But it is much more difficult, especially in the absence of accurate information, to distinguish primary syphilitic maculæ from the spots or stains which syphilitic squamous patches and un ulcerated flat tubercles leave behind them after their disappearance. The yellow spots of the syphilitic exanthema are always evidently slighter, usually of smaller size, and less regularly circumscribed.

Syphilitic maculæ are almost always accompanied with other symptoms of venereal affection of the system.

868. Syphilitic eruptions are very rarely seen to affect the bullous form; I shall, however, by and by have occasion to describe an eruption which frequently accompanies the phlyzacious form of syphilide, and is characterized by large pustules, at the base of which a bullous areola is formed, and which at a later period becomes covered with a broad and prominent brownish scab, similar to that of rupia (§ 300.)

The following case induces me to imagine that syphilis may mani-

<sup>1</sup> This description of venereal exanthematous inflammation is more frequent than is generally believed. I have seen several examples even without eruption on the skin. Carmichael has described this exanthema very accurately; Hunter has also mentioned it.

<sup>2</sup> "Accidunt et maculæ corpora valde infestantes, quæ corpore purgato tolluntur, si fuerint rubæ, sanguisugæ applicentur, quæ materiam sugant; si nigræ, fortiter abstergentibus utendum est; si cum his fuerint tubercula, difficillius remouentur; si solæ, mirè iuvat amygdalinum oleum (Francisci Frizimelicæ. De morbo gallico tractatus. — Aphrodisiacus, p. 998).—Hinc, ergo cutis maculæ planæ, non extuberantes, ephelidibus similes, discretæ...latius expansæ si in pluribus locis continuis; livescentes, purpuræ, rosæ, flavæ, etc. (Astruc. De morbis venereis, 4to. Parisiis, 1738, p. 343.)

Secondary spots have been designated under other names (Defædationes, vestigia pustularum et aliorum ulcerum (Massa); Blotches (Hennen).

fest itself on the skin under a shape more completely bullous. A man, aged 58, of good constitution, came to consult me as an out-patient at the Hôpital de la Charité, on account of an eruption which two months before had made its appearance on the upper extremities, and within the last month had showed itself upon the buttocks. The appearance of this eruption was not in every place the same; where it seemed to be beginning, a small bleb was observed, transparent or nearly so, not very prominent, and of the size of a hemp-seed or small pea, standing in the middle of a spot slightly vinous in its colour, and as large as a sixpenny piece or a shilling, the part which was not raised by serum forming a broad areola around the bleb, well defined and not melting gradually into the surrounding skin. In other places these bullæ evolved on spots, which presented the same general tint, were succeeded by a small laminated, yellowish scab prominent in its centre, surrounded by a white rim not very distinct from the edge of the spot. On other spots, again, the scab which covered their centre was still smaller, and surrounded by a broader areola, of a yellow copper colour, separated from the healthy skin by an irregular rim; lastly, between these scabs and bullæ, the breadth and peculiar colour of whose areolæ distinguished them sufficiently from pemphigus, there existed many oval spots of a dirty yellow, and several others which were smooth and shining on the surface, and of a yellowish-red colour.

Several years before, this man had had three chancres on the corona of the glans, which had been treated and healed up under the influence of mercurial inunction continued for a month. A year before this he had also suffered from a gonorrhœa of which he got well after having taken the liquor of Van Swieten<sup>3</sup> for six weeks. Two years afterwards he contracted gonorrhœa, again; from this attack he also recovered, under the use of the same medicine continued for two months. From this time he has on several occasions laboured under excoriations on the penis, sores in the mouth, and spots upon his body. Very lately he has also suffered from pains in the joints and superficial bones.

I recommended him to make use of the tisan of Feltz<sup>4</sup> and the Sedillots pills.<sup>5</sup> I regret being unable to state the definitive issue of this treatment; the patient soon felt relieved, and then ceased his visits at the hospital.

869. There is another form of venereal eruption fully as rare as the preceding: this consists of a crop of vesicles analogous in form to those of eczema simplex, but a little less voluminous, and surrounded by a coppery and characteristic areola. I have taken notes of no other than the following case of this eruption; indeed I only remember to have met with the disease once besides, which was less distinctly marked and much more doubtful. A man of good constitution, and formerly a soldier, aged 35, had a gonorrhœa in his 20th year, (1819,) which was speedily and radically cured. A second clap, caught in the following year, did not last longer than a fortnight. Three years later, from a fresh infection, a chancre appeared upon the prepuce; this sore was dressed with mercurial ointment, and healed rapidly. A month after the chancre was whole, the patient began to feel pains during the night in the shoulders. The patient then took Van Swieten's liquor for a fortnight, and the pains left him. In 1827 nodes began to be formed on the left shin, and were treated with the tisan of Feltz. The pains of the bones which had attended them for three months ceased under the use of this medicine. The patient has long complained habitually of sore throat; but since October 1830, his distress from this cause has very much increased, and lately he has felt his food, in the act of swallowing, escape into the nasal fossæ. Night and day he suffers with violent pain in the head, and he once passed eight days without sleeping. For a year past he has followed the strictest regimen, eating little, abstaining from wine, and taking milk night and morning; this system did him no good; on the contrary, he lost flesh very much. More recently he has taken a tisan of the sudorific woods.

On the 18th of July, 1834, an eruption made its appearance on the hands and forearms, forehead and trunk, which, on the 2d of August, presented the following characters: On the forearms several irregular

<sup>3</sup> An alcoholic solution of corrosive sublimate.

<sup>4</sup> A compound decoction of sarsaparilla and sulphuret of antimony.

<sup>5</sup> The blue pill made with grease instead of syrup or confection of roses.—Tr.



clusters of minute reddish elevations, of the size of pins' heads, containing a turbid or opaque fluid. These vesicles were not itchy; they were more prominent and more globular than those of simple eczema, which they also exceeded somewhat in dimensions, but they were inferior in size, not so transparent, and disposed in clusters less regular than those of herpes; their reddish and rather livid tint distinguished them from the pustules of impetigo. In other situations the eruption formed small rings, analogous both in shape and size to those of measles. Many of the vesicles in several of the clusters had declined, and were succeeded by a slight exfoliation of the epidermis, presenting in some places a slender rim, which indicated exactly the former size of the vesicles. Wherever this exfoliation had taken place, the skin presented spots having precisely the same appearance as ordinary syphilitic maculæ. The eruption differed from syphilitic psudracia, the pustules of which are larger, more acuminated, and usually followed by scabs, and often by ulcers and cicatrices. A portion of the uvula and velum palati was destroyed; the posterior pillar of the left side and corresponding part of the velum palate had contracted adhesions with the opposite surface of the posterior parietes of the pharynx; a grayish ulcer, as large as a silver two-penny piece, was perceived on the right side of the palatine arch, near the median line and the commencement of the pendulous velum; the patient made no complaint of pain in the throat although he now no longer followed any system of regimen.

I recommended a course of the tisan of Feltz and pills of Sedillot, which the patient immediately entered upon and continued for some time with advantage. I saw him shortly afterwards; the vesicles had disappeared, but the spots still remained; I am not aware, however, whether the cure was complete, the patient having soon discontinued his visits at the hospital.

In another case of constitutional syphilis, I saw an eruption of small vesicles with violet-coloured bases in the hollow of the foot, which were probably of the same nature as those described in the preceding case.

870. The general character of this vesicular *syphilide* will only be accurately specified when a greater number of particular and more complete cases have been recorded. M. Gilbert<sup>1</sup> has published a case similar to the one I have detailed, and the Messrs. Cazenave and Schedel<sup>2</sup> have given another in which the eruption presented a different appearance.

871. In those who are labouring under syphilis, a number of *psudracious pustules*,<sup>3</sup> about the size of those of rosacea, are often observed. These small pustules may appear on any region of the body, but their most frequent seat is the forehead and the shoulders. The date at which this species of eruption makes its appearance, after that of the primary infection, is as uncertain as it is in regard to all the other syphilitic eruptions. I have occasionally observed it to supervene very shortly, sometimes only four or five weeks after this event. The eruption is sometimes *preceded* by fever, pains in the head,

shoulders, and larger articulations. After appearing on the shoulders, the eruption may spread to the extremities. The fever does not always cease on the evolution of a first eruption; it continues so long as fresh crops of pustules make their appearance. The articular pains are usually more severe during the night than the day.

872. The pustules are at one time extremely numerous and almost confluent on the face, back, and belly; at other times they are fewer in number, and disseminated over the whole surface of the body. They vary in colour from a pale to a deep crimson-red. They do not all make their appearance at once, and after a primary febrile paroxysm: they appear successively, so that in the same subject pustules in a nascent state, and in a state of maturity, are frequently to be seen at the same moment. The pustules individually are conoidal, of a dull red colour; their base is hard, surrounded by a coppery areola, their summit, slightly acuminated, is filled with serum or pus. In their decline the pustules are covered with a small scab, of a dirty yellowish-gray colour, under which there is found an ulcer, of such insignificant dimensions, that it might be covered with the head of a small pin. By and by, a small circular, brown, depressed cicatrice, which gradually acquires a dull white hue, succeeds the sore, around which a kind of tawny yellow areola is for a very long time perceived. After the fall of the scabs, however, it sometimes happens that nothing remains beyond small brownish spots or stains, without any appearance of ulceration or of cicatrice.

873. Syphilitic psudracious pustules are apt to be preceded, especially in individuals of bad constitution, by violet or nearly black stains, which only disappear very incompletely by pressure. These stains are occasionally very much crowded together, indeed, confluent, so as to form broad patches, as large as a five-shilling piece, and very commonly of an oval form. These spots become covered with a great number of small and slightly acuminated pustules, which for the most part fall into a state of irregular and generally superficial ulceration. After these get well, numbers of broad yellowish-brown patches remain on the skin, which are commonly beset with small, whitish, and depressed cicatrices.

874. When syphilitic psudracia have appeared as an abundant eruption upon the trunk and extremities, the *diagnosis* is seldom uncertain. The disease cannot be confounded with impetigo *sparsa*, the discharging pustules of which do not ulcerate, (§ 532,) nor with any form of accidental or artificial pustular eruption (§ 568). It is more difficult to distinguish the eruption of which we are treating, from that of acne and rosacea, when its principal seat is the back, and shoulders, and face. Yet as the pustules of acne rest on a red base, and those of rosacea are surrounded by a bright erythematous areola, whilst those of the syphilitic eruption stand in the midst of a copper-coloured injection; and, further, as rosacea does not ulcerate, and is not followed by the peculiar depressed cicatrices, observed after the greater number of syphilitic psudracia; and, lastly, as in acne, the skin generally looks shining and unctuous, and is often covered with spots and indurations, whilst in the syphilitic affection it is healthy, or rather dry, in the spaces between the pustules; there seems no great hazard of confounding one of these eruptions with the other. To conclude, these small syphilitic pustules are readily distinguished from venereal papulæ, when these several eruptions are at their height. The period at which the pustules dry up, differs also considerably from that at which the papulæ begin to shrink and desquamate.

875. Psudracious venereal eruptions are liable to be accompanied or followed by various other secondary symptoms.<sup>4</sup>

876. *Syphilitic phlyzacious pustules*.<sup>5</sup> An eruption of pustules, of

<sup>1</sup> "Un malade, offrant bien d'autres symptômes vénériens consécutifs, portait à la face externe et postérieure de l'avant-bras une large tache d'un rouge cuivré, obscur, semée de petites vésicules séreuses, passant à l'état de dessiccation, et assez analogues à celles de l'eczéma. La teinte cuivrée et livide de cette éruption, bien différente de la coloration rosée ou rouge de l'eczéma, l'aspect flétri des vésicules, l'absence des excoirations squameuses de la dartre squameuse humide, la marche de la maladie, les phénomènes concomitans, établissent des caractères distinctifs suffisans." (Gilbert. Manuel des maladies spéciales de la peau, 12mo. Paris, p. 203.)

<sup>2</sup> Cazenave and Schedel. Abrégé pratique des maladies de la peau, 8o. Paris, 1828, p. 419.

<sup>3</sup> Of one hundred and three cases of syphilide which I have seen, no more than six consisted of psudracious pustules. This form was pointed out long ago: "Est cum pustulis acutis, non latis, et festine, generatur in ea sanies quasi laudabilis." (G. Torrella. De pudendagrâ tractatus). The psudracious pustular syphilide is also vaguely indicated by J. Benedictus: "Pustulæ parvæ tendentes cum rubore ad citrinitatem, et velociter exeuntes, et ulcerantes, facientes in cute asperitatem et dolorem, etc. . . Si sunt, parvæ, duræ ad nigredinem tendentes cum privatione doloris," etc. (Joannes Benedictus. De morbo gallico libellus, cap. iii.—Aphrodisiacus, p. 171.) Hunter appears to have known this species of eruption. (Op. cit. p. 338.) M. Alibert has given a good representation of this eruption, under the name of syphilide pustuleuse lenticulaire, p. 43. Under the name of papular disease Carmichael has reunited the psudracious syphilitic eruption and the papular syphilitic eruption. He gives two cases of psudracious pustules: Case 1. Gonorrhœa, phymosis, inflammation of the glands, buboes, swelling of the scrotum; diminution of the symptoms; four months and a half after the attack, redness and excoriation of the throat; three days after, fever and eruption of psudracia; pains of the joints; small ulcers on the scrotum. Case 6. Superficial ulcer of the gland, buboes, fungous ulcer; eruption of psudracia.

<sup>4</sup> Dr. Carmichael assures us that in several hundred psudracious and papular eruptions which he has treated, he has never once met with exostosis at the same time. This complication is rare; nevertheless I have seen several cases of it.

<sup>5</sup> Torrella appears to have described this species of pustule: "Juvenis infectus pupendagrâ phlegmatica, cum pustulis grossis crustosis, ex quibus exibat sordities grossa ad alba fuscadinem tendens." (Gasparis Torrellæ. Consilium tertium.—Aphrodisiacus, p. 549.) Fallopius, in his description of crusted venereal pustules, appears to include phlyzacious pustules and syphilitic rupia: "Secundum genus pustularum est habentium crustam, et istæ rotundæ sunt, ut plurimum et crustas adeo crassas faciunt, et prominentes ut veluti cornuum principia videantur: isti cortices aliquando aridi, aliquando turgentis sanie sunt. Sanies aliquando lutea, veluti mel: aliquando alba, veluti pituita, aliquando subnigra, etc." (De morbo gallico tractatus.—Aphrodisiacus, p. 824.) Carmichael has lately described and represented syphilitic ethyma and rupia (pl. iii.), which he considers as eruptions peculiar



a larger size than those that have just been described, of a flattened form, not at all prominent, generally distinct, surrounded by a coppery base, containing, at their height, a yellowish fluid in their heads, which, by and by, dries into a blackish adhering scab, is frequently seen appearing upon the nape of the neck or shoulders, occasionally on the cheeks, or parts covered by the beard, more rarely on the extremities, and still more rarely on the other parts of the body, as a secondary symptom of syphilitic infection.

The eruption in this case may be scanty, the pustules appearing far apart and extensively disseminated, or, on the contrary, they may be rather crowded, regularly grouped, now in the shape of a kind of band passing from one cheek to the other across the chin, again in symmetrical lines upon the nucha, and down the shoulders on each side of the median line, so as to cover the region of the trapezius, or in directions which recall the course of the latissimi dorsi. Although I have occasionally met with this kind of symmetry in other cutaneous eruptions, I think I have seen it more frequently along with phlyzacious syphilidæ than any other form of disease. When the eruption appears occupying extensive regions, many pustules are commonly observed here and there in clusters, whilst others are scattered irregularly in the intervals between these.

This form of venereal eruption is rarely preceded by fever. It often shows itself after pains in the bones and joints have been complained of,—after ulcers have been seen in the pharynx, &c. Each pustule appears at first upon a reddish spot, the centre of which becomes purulent, whilst its base, as it extends, is surrounded with a slight areola of a deep or livid-coloured brown. Some of these pustules always remain of insignificant size, like those of ecthyma at their origin; the fluid they contain, as it dries, seems to become incorporated with the epidermis, and forms a small set scab, the centre of which is black, or nearly so, whilst the circumference is surrounded by the cuticle detached and dried. After the spontaneous fall of these scabs, the skin presents a spot of a coppery red, the centre of which is commonly occupied by a small depressed cicatrice. These consecutive spots or stains are much more conspicuous where the pustules are clustered.

The small phlyzacious venereal pustule differs from the psyracious pustule of the same description, in the circumference of the former being still somewhat the larger of the two, in its scab being also larger and more regularly set within a rim of cuticle, which membrane is also more extensively loosened around its circumference.

877. Phlyzacious syphilitic pustules approximate more closely in the particulars of form and size to the phlyzacious pustules of ecthyma and variola. Like these, for instance, they are almost always disseminated. The greater part of their surface, when they have attained their height, is of a yellowish-white, and the coppery circle which surrounds their base is broad and tinged. They begin to dry off in the centre, which presents a scab of a yellowish and brownish or olive green colour, of a flattened form, separated from their edge by a small circle, which is gradually effaced as the drying advances. When this process is completed, if the scab be detached, it is found to have penetrated the substance of the corion deeply, and to have concealed a little ulcer, which generally implicates the entire thickness of this membrane.

878. These consecutive ulcers are particularly remarkable among new-born infants after they have been several times immersed in the tepid bath, and the scabs by this means detached. They are also very apparent about the margin of the anus, on the upper and inner parts of the thighs, &c., situations in which the natural moist state of the skin prevents the formation of proper hard scabs. These ulcers, as I have said, are followed by depressed and very evident cicatrices. The form and dimensions of several of them seem occasionally to proclaim that they had succeeded ulceration of a serpiginous kind; but this is in appearance only, for instead of the cicatrized furrow succeeding this form of ulcer, the bands which here appear are found to be made up of a chain of *circular* cicatrices, touching each other by their edges.

The evolution of phlyzacious syphilida being successive, we may, in particular cases, often observe at the same time copper-coloured

to the phagedenic venereal disease. Cullérier designates them as scabby pustules; but he also applies this denomination to ulcerated tubercles, covered with scabs.

flattened pustules; pustules of the same general form and appearance, but of much larger dimensions; small laminated scabs, and others more prominent and more deeply set within the corion; livid and yellowish-coloured blotches; cicatrices of the same aspect, and when of an older date, depressed, and of a dull white; the sum of these appearances is very characteristic of the nature of the eruption.

879. It sometimes happens in a case of phlyzacious eruption, that a certain number of pustules, after attaining their height, increase in consequence of a considerable detachment of the cuticle effected by means of a deposit of purulent matter around their circumference. These pustules, the base of which becomes bullous, and which are subsequently covered with large and prominent incrustations, have been designated by reason of their appearance, under the title of *syphilitic rupia*. In this variety the scab is not only broader but more prominent, especially at its centre.<sup>1</sup> It cracks and becomes irregularly loosened around its circumference, and the skin in the latter situation is of a coppery hue, but is not ulcerated. After the central part of the scab is detached, a sore of greater or less extent is always exposed, which presents the general characters of syphilitic sores, and this latter circumstance is the one which distinguishes *syphilitic rupia* from *rupia simplex*, for both of them present central ulcers surrounded by a circular red surface and an epidermic border or rim.

880. When syphilitic rupia is left to itself, ulceration continues to go on under the scab, which becomes ever more and more prominent, and acquires the appearance of the non-venereal rupia *prominens* already described. When the scab is pressed upon, some purulent matter is made to exude from under it; its circumference also continues bathed in pus for a time. This secretion diminishes by slow degrees; the base of the incrustation then hardens; the cuticle loosens and cracks around its circumference; portions of the scab are next detached, so that it is lessened in thickness or diameter. The cicatrization of the sore goes on from its circumference towards its centre. When the whole of the scab is removed, and the ulcer completely healed, the cuticle which covers the cicatrix remains subject to repeated exfoliation for some time afterwards. The ulcer seldom exceeds in dimensions the size of the bleb which preceded it, unless it has been irritated by exercise when situated on one of the legs, or by stimulating applications, when any other part of the body is its seat.

881. I have seen syphilitic rupia presenting all the appearances of rupia *escharotica* in a woman who was labouring under a squamous syphilide. On the outer and lower part of this patient's right leg there was a gangrenous sore nearly as large as a crown piece, the surface of which was of a brownish black colour, spongy, covered with blackish or gray filaments, and which exhaled a gangrenous odour. A circular groove of considerable depth surrounded the eschar and separated it from the neighbouring skin, the cuticle of which was raised like a ring by the effusion under it of a quantity of purulent matter. After the detachment of the slough the ulcer presented the characters of syphilitic sores in general, and healed up as the other symptoms of the constitutional affection yielded under the influence of mercury.

882. Yellowish lenticular spots are occasionally observed on the palms of the hands and soles of the feet, of individuals labouring under syphilitic eruptions of different elementary forms. These are very similar in appearance to the pustules of small-pox, developed in the same situations in their stage of desiccation. If the cuticle covering these spots be removed with the point of a pin or a lancet, a small yellowish-coloured disc is discovered under it, which may be taken away, like that of small-pox, to which it bears the greatest resemblance. Through the cuticle these discs have a yellowish copper colour. When this eruption is not interfered with, the altered portion of cuticle and lenticular disc are detached. The palm and sole then look very much

<sup>1</sup> Here is a case of this rare variety. A man nearly thirty years of age had contracted the venereal disease four different times. The last infection was followed by gonorrhœa and ulcers on the corona glandis (treatment by mercurial friction, liquor of Van Swieten and tisan of Feltz). Shortly after he was seized with venereal pains, and after several vapour baths, an eruption of large pustules, similar to those of ecthyma, with coppery red edges, showed itself upon the breast, and successively on the trunk and limbs. The matter of these pustules, on drying, gave place to scabs of a dusky brown, most of them conical, similar to those of rupia *prominens*. In falling off, these scabs left bare ulcerations, which had the appearance of venereal ulcers. This serious disease was successively treated with subcarbonate of ammonia, muriate of gold, and nitric acid, and it was only after six months' care that the cure was accomplished. I have seen another case which also belonged to this variety.



as they do when they are affected with a squamous syphilitic eruption; but the presence of the disc under several spots, enables us to distinguish between these two forms of the disease. Further, in this eruption there is a less marked tendency to the reproduction of squamæ than in syphilitic psoriasis.

These venereal eruptions in the palm of the hand and sole of the foot, can never be mistaken for syphilitic rupia, the development of which, in these situations, is extremely rare, and which is, besides, sufficiently characterized by its central scab and the ulceration it occasions.

883. *Syphilitic papulæ*<sup>1</sup> are firm elevations, solid or containing no fluid, scarcely ever accompanied with pruritus, and generally ending in resolution and desquamation, but occasionally also in little depressions and small cicatrices.

This form of eruption may appear almost suddenly, or in a slow and successive manner.

884. When the eruption is rapidly evolved, it takes place within from twenty-four to forty-eight hours; it is sometimes preceded by general febrile symptoms, and with pains in the joints, symptoms which are especially relieved by blood-letting, when the state of the constitution does not contra-indicate the practice. The blood abstracted is almost uniformly buffy. The eruption shows itself most usually at once, or nearly at the same time over the whole body, but especially upon the back and the face. It is characterized by small solid elevations of a coppery red colour, slightly conical, but little prominent; and which only cause a trifling amount of pruritus, if perchance they occasion any. These papulæ are sometimes very closely crowded together, and almost confluent, so that the skin of the back and face presents a uniform reddish coppery colour. It very rarely happens that they are disseminated and isolated; often on the contrary they form small oval clusters, the size of a shilling or somewhat larger, separated from one another by spaces covered with thinly disseminated papulæ. Within a few days the eruption begins to fade; the papulæ shrink; may desquamate slightly; all leave small yellowish stains upon the skin which vanish very shortly.

885. Syphilitic papulæ are occasionally evolved in another manner, and present a different appearance. They make their appearance slowly and successively, commonly on the limbs and in the sense of extension, sometimes on the forehead and surface of the hairy scalp, larger than in the first instance, flattened, and of the size of small lentils, very regularly circumscribed and slightly raised above the general level; they are of a *yellowish copper colour*, not itchy, without any inflamed areolæ surrounding their bases, and separated by intervals in which the skin is healthy, or sallow and shriveled, an appearance which it is particularly apt to present in the aged, or individuals of indifferent constitution. The cuticle is detached from the summit of each of these papula, arrived at its height, in the form of a small dry and grayish-coloured pellicle, more strongly adhering at its centre than towards its circumference, and sometimes in the shape of a small disc. This desquamation is repeated from the surface of the papulæ until they have shrunk completely, and are replaced by little lenticular spots or stains of a grayish yellow, which continue visible for a very long time.

These broad yellow desquamating papulæ may be so much crowded over regions of such extent, as to simulate a squamous eruption,

especially if the neighbouring skin, dry and shriveled, is itself the seat of a desquamation at all considerable.

886. Syphilitic papulæ occur with a third appearance: they are of a brownish livid or violet colour, and are evolved slowly, and in succession like the yellow papulæ, the very considerable dimensions of which, however, they never attain. They are also less flattened, more prominent, and more constantly arranged in clusters; they continue long stationary at their height. Some of them, after the fall of the small epidermic disc that covers them, shrink away slowly, and the skin, in the corresponding points after their disappearance, presents a small wrinkled depression of a dirty brown colour, which might be covered with the head of a pin. Others ulcerate on their summits, and become covered with a small brown scab, similar in size to that which follows psyracious pustules. The ulceration does not extend to the whole surface of the papulæ; their base and their bodies shrink, and besides the small brownish depression in the point which they had occupied, the skin, at a later period, presents a little central point, of a bluish-white colour, which is occasioned by a true cicatrix.

After the shrinking of the clusters, they leave behind them oval spots or stains as large as a half crown, and even as a crown piece, of a yellowish brown, and occasionally of a livid colour, the surface of which is sprinkled over with small points of a deeper shade of the same tints. These little marks differ from those that succeed psyracious pustules in clusters, not only in the circumstance of their following papulæ, but in being commonly less crowded together, and more wrinkled than those that are the consequence of the pustular eruption in question.

887. The papular syphilitic eruption presents itself with yet a fourth appearance, and this is the last I shall mention; it occurs in the guise of large oval clusters, *pretty regularly circumscribed*, which, as in ordinary lichen *circumscriptus*, continue for some time to spread around their circumference, whilst they are getting well in their centre. The syphilitic may be distinguished from the simple eruption mentioned, by the greater size of the papulæ, and by their violet and coppery colour. In some cases, the centres of these circumscribed syphilitic lichenous eruptions ulcerate, sometimes to such an extent, as to leave broad cicatrices behind them. These are at first of a bluish colour, but at a later period, become of a dull white, and sometimes more than two inches in diameter.

This variety of the papular syphilitic eruption is extremely rebellious; it is of very rare occurrence.

888. *Syphilitic squamous eruptions*.<sup>1</sup>—These are characterized by *coppery patches* of a more or less regular round shape, smooth and shining, little or not at all affected with itchiness, the surface of which is the seat of an epidermic exfoliation.

889. These patches are generally met with on the face, forehead, surface of the scalp, and more rarely on the back of the body. In the majority of cases, the patches of these squamous eruptions are nearly of the same size as those of psoriasis *guttata*, *i. e.*, from six to eight lines in diameter. They generally appear six to eight weeks after the cure of primary syphilis: sometimes, however, they are much later of making their appearance.

They are most frequently *distinct*, slightly prominent, irregularly rounded, and covered with thin squamæ, which adhere pretty firmly. When these squamæ are detached, the skin beneath them is smooth, shining, of a coppery colour, and slightly raised and rounded. Each of the spots or patches is very regularly surrounded by a whitish rim or border, formed by the epidermis dried and detached or torn circularly. This edging of raised epidermis does not differ essentially from

<sup>1</sup> Syphilitic papulæ have been indistinctly described under the name of *pustulæ siccæ*, which the older writers have also made use of to designate tubercles and squamæ. Willan has very well described syphilitic, violet-coloured and ulcerating papulæ, and has distinguished them from lichen lividus. (Art. lichen lividus.) M. Alibert has given the principal characters of syphilitic papulæ, scattered or in groups, under the name of syphilide pustuleuse miliaire. A case is published under the erroneous name of *scabies venerea*.—(Journ. Gen. de Med., t. xli. p. 377.) Several pupils of the school of Cullérier (senior), describe them under the name of *miliary and itchy pustules* (Guérin Alex. *Diss. sur les pustules vénériennes*.—Thèse. 4to. Paris, 1813, p. 17). Carmichael has reported several cases: Case iii. Phymosis, discharge from the glans, pains of the joints, more violent during the night; five months' illness;—the sixth month, papular eruption, cure, relapse, tumours of the tibia.—Case iv. Superficial ulcer on the prepuce; a general papular eruption in clusters, and confluent; flat tubercles on the scrotum; pains in the joints.—Case v. Superficial ulcers; discharge from the glans and the urethra buboes; papulæ on the abdomen and breast.—Case vi. Discharge from the glans, superficial ulcer without induration; papular eruption; excoriation of the pharynx; pains in the joints: six months' illness. Case vii. Phymosis; discharge from the glans and urethra; excoriation of the throat; scattered yellow papulæ. Of one hundred and three cases of venereal eruption, I have only observed fifteen papular.

<sup>2</sup> Massa has particularized the appearance of certain syphilitic eruptions, § 891. Hunter has described the syphilitic squamous eruption, (especially of the hands and of the soles of the feet), and has remarked that the eruption was modified in its appearance, where two contiguous surfaces of the skin were in contact, as on the labia, about the circumference of the anus, &c.—(Op. cit., p. 339.) Willan has described *psoriasis* and syphilitic *lepra*, which he has distinguished, very properly, from *lepra nigricans*. Dr. Carmichael believes this form of venereal eruptions to be a consecutive symptom *peculiar* to the Hunterian chancre; and, as according to Dr. Carmichael, this ulcer is rare, he has been led to advance, that squamous syphilitic affections had been observed by him in a very small number of cases only, during the six or eight years which had preceded the publication of the second edition of his work; it is, notwithstanding, one of the most common forms of syphilitic eruption. In one hundred and three cases I have observed it eighteen times.



that which is observed to follow the desiccation of the small bullæ in some cases of pemphigus after the detachment of their laminated scabs; but the spots in the squamous syphilide surrounded by these cuticular rims, are raised and rounded in their centre, and of a reddish coppery hue, whilst the marks that remain after the detachment of the crusts of pemphigus are level, of a pale rose colour, and neither so smooth nor so shining. These remarks are also applicable to the red stains left by *rupia simplex*, after the complete or partial detachment of its scabs, which presents this peculiarity, that the epidermic edging around them is much broader and more irregular, and that the centres of the spots are often ulcerated and covered with scabs.

After the fall of the original discs or epidermic laminæ, which cover each syphilitic patch, the desquamation from their surface becomes much more trifling, and occasionally even insensible. If treated appropriately, the patches sink, become pale and disappear, without leaving cicatrices, after the lapse of one, two, or three months.

890. Syphilitic squamous eruptions occasionally present themselves in irregular groups, in which case their usual seat is the legs. The clusters blend by their adjacent edges; epidermic discs and laminæ are thrown off from several points of the surface of these broad irregular patches, which appear partly smooth, and partly covered with squamæ, and in other places of a coppery yellow colour. Besides these clusters isolated spots, covered or uncovered with squamæ, are almost always to be detected, existing on other regions at the same time.

891. Besides these two great divisions of the squamous syphilitic eruptions (*squamæ discretæ*; *squamæ confertæ*), they occur with a variety of particular appearances according to the regions of the body affected, which demand attention.

892. On the surface of the *scalp* the squamæ are always furfuraceous, and often of a yellowish, sometimes even of a slightly greenish tint. Here the spots when freed from squamæ, are not observed to be surrounded by the usual cuticular rim. The raised and rounded appearance of their surface is also less evident; yet the finger passed carefully over them distinguishes a slight degree of swelling, much less evident than that presented by the flat tubercular elevations which have been described, and which we shall immediately describe, under the name of *syphilitic lepra*.

893. In the *palms of the hands* and *soles of the feet*, syphilitic *psoriasis*<sup>1</sup> is almost uniformly *distinct*; it makes its appearance by a number of spots, of from three to four lines in diameter, but little or not at all prominent, or raised above the general level, and of a yellowish colour, very similar to that of the thick horny indurations of the cuticle often seen in the palms of the hands. If at this stage of the disease, a portion or the whole of the altered epidermis be removed from one of the spots, a thin layer of a yellowish substance will frequently be found deposited between the surface of the cutis and detached cuticle. Small lamellar scales of epidermis are very regularly thrown off from the palmar aspect of the hand, and sole of the foot, which almost always present a mixture of yellow, of red, of violet, and of copper-coloured spots or blotches, surrounded by an epidermic rim. The spots of syphilitic *psoriasis* are occasionally arranged in the form of a large ring on the palm of the hand; at other times they present the appearance of a kind of arc of a circle, something like *psoriasis gyrata*.

When the spots are evolved between the toes, they are first moist and whitish, then excoriated and red, and at length accompanied with rhagades or fissures.

When palmar or plantar syphilitic *psoriasis* is of considerable extent, and no means are taken to arrest its progress, the eruption is repeated several times in the course of a few months, and the skin cracks extensively in various directions. These rhagades are very much increased by using the hands in any way, especially by the constant motions required in handicrafts of all kinds, by the action of cold, the contact of acid baths, or alkaline leys, &c. When

squamous syphilitic eruptions occur by the edges of the nails, the parts around them are often very severely chapped, and true syphilitic onychia has occasionally been seen following this affection.

894. Those who are the subjects of syphilitic squamous eruptions of the nature of *psoriasis*, almost always exhibit about the axillæ, the inner and anterior parts of the thighs, the scrotum, labia majora, margin of the anus, commissures of the lips, &c., certain spots or patches which have many of the characters of flattened tubercles: this difference of appearance, however, in the squamous spots, seems to depend on difference of local situation. (a)

(a) Mr. Skey (*Lectures on the Venereal Disease*, in *Med. Gaz.*, 1839) has the following remarks on the principal syphilitic eruptions.—“The eruptive disease exhibits itself in one or more of three forms, of which the first and simplest is that which is called *mottling*; but it is important to observe that, although a frequent attendant on it, it is not peculiar to syphilitic disease.

“It consists in a patchy discoloration of the skin, varying in depth of colour from the lightest pink to a distinct red, abrupt in its margin, and slightly rough to the touch. Like a large variety of cutaneous eruptions, it fades on the approach of cold, appearing more distinct on the application of any forms of stimuli that tend to promote the cutaneous circulation. It appears most generally on the chest, front of the arms, and on the groin; it may also appear on the face or forehead. The patches are often very large, giving an altered tint to the surface, of some inches square.

“The two eruptions, however, that especially characterize syphilis, are *psoriasis* and *lepra*.

“Syphilitic *psoriasis* appears in the form of circular spots, about the size of a small finger-nail, generally round, or nearly so. These spots are based on disease, not of the cuticle, but of the skin, which is inflamed and thickened, giving to the spots a slight degree of elevation, perceptible to the touch on passing the finger over them. The base is red, or of a reddish brown, and from which the cuticle peels in dry scales or flakes, from the period of their first appearance; they are therefore characterized throughout by the scaly eruption. The process of desquamation occurs not in large, but often in minute and broken scales of morbid cuticle, and much less considerable than in some other forms of scaly disease; and this constitutes the prominent feature of the affection from the commencement, by which it is distinguished from the desquamation of pustular, vesicular, or papular eruptions, for in these the desquamation attends the latter stage only.

“The syphilitic *psoriasis* often makes its first appearance on the scalp and forehead, on the chin or upper lip, and back of the neck, and more frequently extends to the chest, abdomen, front or inner surfaces of the arms, chiefly about the elbow-joints, to the palms of the hands; also to the front and inner part of the thighs. Eruptions of all kinds are modified by the density of the surface they occupy; therefore we are not surprised to find syphilitic eruption of the palms somewhat peculiar. It forms what has been called a honeycomb eruption; the cuticle separates slowly in circular patches, and is imperfectly reproduced. Mr. Carnichael first remarked also the peculiar appearance of syphilitic eruption, when situated on commissures of skin, or where two cutaneous surfaces are in contact, as at the nates, or between the toes. Here there is no desquamation nor dryness, the eruption being more inflammatory and moist, like a soft and highly-organized wart. I am inclined to think, however, that this appearance is not peculiar to syphilitic disease, as I have seen it in phagedena, as well as in other eruptions, unequivocally not venereal. It is very rare that phagedenic eruption appears on the palms, but I have seen it distinctly marked in more than one instance.

“The third form of eruption is that of *lepra*, which is obviously pathologically identical with the last-described eruption, but appears in larger and deeper patches, surrounded by a narrow inflammatory ring, and based rather on the subcutaneous tissue than on the skin. These eruptions form incrustations of a brown colour, raised considerably above the surface, which separate as the substratum ulcerates. The crusts might be mistaken for the *rupia* of phagedenic disease, but they are slower in forming, and may be determined by the character of the eruption around. The eruption of syphilis—be it *psoriasis*

<sup>1</sup> *Psoriasis syphilitica palmaris et plantaris*, has been observed from the beginning of the epidemic of the middle ages. “Et cum ista aegritudo prolongatur, apparent in aliquibus fissuræ, et squamæ in volis manuum, et plantis pedum, et sunt albæ, duræ, sine humiditate, et aliquando invadunt alias partes corporis.”—(Massa. De morbo gallico, liber cap. v.—Aphrodisiacus, p. 45.) Astruc gives its characters under the name of *pelarelle*.—(De morb. Vener., lib. iv. cap. i.)



895. The coppery colour of the patches of the squamous syphilitic eruption, aids essentially in distinguishing it from simple psoriasis. In the syphilitic affection, too, the cuticle is detached from the skin; but there is not, as in ordinary psoriasis, an abundant production of squamæ.

896. The venereal disease may proclaim itself upon the skin in another form of squamous eruption, which has been described as venereal *lepra* (Willan).<sup>1</sup> This eruption, at its height, is characterized by rounded or oval-shaped patches, depressed in their centre, generally of a livid red colour, but occasionally almost black, from half to three-quarters of an inch in diameter, and covered on the surface with grayish epidermic lamellæ.

This eruption, which may be diffused over almost the whole body, is sometimes confined to a single region, as to the nucha and shoulders, to the hypogastrium and upper parts of the thighs, to the forehead and hairy scalp, &c. The patches severally commence as papular elevations of the livid or blackish colour mentioned, smooth on the surface, and not covered with squamæ. These elevations spread circularly until they are three or four lines in diameter, when their centres become depressed, whilst their edges, sharply defined, rise very distinctly above the level of the skin around them. The cuticle which covers them, now begins to assume a gray and somewhat yellowish tint, most conspicuous on those patches which are lightest in colour; and, by and by, it splits, and is cast off from different points of the surface, but especially from the centres of the patches. This desquamation is several times renewed, but it is never abundant as it is in *lepra vulgaris*, or in psoriasis. The cuticle, of no great thickness, smooth, shining and diaphanous, masks the violet tint of the corion, which it covers very imperfectly; it is, in fact, a simple desquamation of the cuticle that takes place upon these syphilitic spots, not an evolution of true squamæ. When the patches acquire a larger size, the desquamating process continues to go on from their margin, after it has ceased upon their centres, which are then smooth and shining, and of a yellowish coppery colour.

897. The advance of the syphilitic patches in question, towards recovery, is indicated by the sinking of their edges and their changing colour, passing from a livid or blackish red to a coppery yellow. The edges of the patches commonly sink in an irregular manner; they appear to break at intervals, and to change into flattened arcs of

riasis or *lepra*—is always characterized by desquamation of the morbid cuticle throughout its progress. The entire eruption appears dependent on one single cause, and *that* a general, and not merely a local one. If one part advances, the whole advances. We need not expose the entire person of a patient, with the view to ascertain the condition of the eruption on a remote part of the body, as is required in the case of phagedenic disease, in which we find the actions of health and of disease variously intermingled—some spots desquamating in the last stage, while new ulcers or rupial crusts are forming elsewhere; but, as in the exanthemata, the whole surface appears obedient to one common influence. Syphilis, unless in a very advanced form, rarely affects the whole surface; those parts I have already mentioned being most obnoxious to it; whereas phagedena is less discriminate in the surfaces it involves. As a general rule, subject, however, to exceptions, the front surface is the seat of early syphilitic eruption, the back in a greater degree that of phagedena.”

<sup>1</sup> *Syphilitic lepra* is only mentioned in an extremely vague and uncertain manner by the modern writers, before Willan, who has described it under the name of venereal *lepra*, and has well distinguished it from the *lepra vulgaris* and the *lepra nigricans*. Venereal *lepra*, says he, differs from *lepra vulgaris* and *lepra nigricans*, by the absence of a hard scaly edge to the circumference of the patches, which are never covered with thick squamæ. Besides, the venereal patches are soft and supple, not dry and rough, and they sometimes ulcerate, which the patches of ordinary *lepra* never do. Carmichael mentions syphilitic *lepra*, following Willan particularly in his description. M. Alibert has given a case of it under the name of *pustular syphilide*.—These spots, of a dusky red, do not at first rise above the level of the integuments, but they soon begin to do so, especially around the edges, which gradually become more elevated than the centre, and are at the same time covered with small white squamæ. These patches had hard, *ruised*, circular edges; the centre was paler than the circumference; in the centre, slight asperities were observed, which were covered with epidermic squamæ; their coppery colour proclaimed their syphilitic nature. (Precis. Theor. et Prt. des Mal. de la Peau, t. ii. p. 227.) I have myself seen several cases of this kind. The Messrs. Cazenave and Schedel have detailed a case in which the patches were extremely dark in colour.

circles, showing a greater intensity of colour than the areas they embrace. It sometimes happens that the whole of the patches begin to fade at the same time, and nearly in an equal degree, over every part of the individual patches: the raised edges which distinguished them then disappear, and the skin presents mere rounded copper-coloured spots, that scarcely desquamate, similar to primary syphilitic maculæ. For several weeks after every trace of elevation has vanished from the margin, the spots continue in the guise of blotches, of an earthy yellow colour, which retain the form, and very nearly the dimensions, of the patches.

898. The colour of these squamous patches, and the appearance of their surface, may be modified by various topical applications—by baths, washes, &c. Under the influence of the vapour bath, I have seen their colour gradually deepen until it became nearly black, and their surface, freed from squamæ, only become covered again after an interval of several weeks. The dark colour disappeared to a certain extent, but still very imperfectly, under the pressure of the finger. In this state it might be found very difficult to distinguish these syphilitic patches from certain forms of *lepra* (*lepra livida*), the spots of which had also been freed from squamæ. The spots of simple *lepra*, however, it may here be observed, are generally larger and rounder than those of syphilitic origin, which are far more frequently oval than circular in their outline, and much more rarely confluent, and united into broad bands and patches, than those of *lepra*.

899. Another circumstance further contributes very commonly to distinguish these eruptions,—it is this: in the centre of one or more of the large patches of the squamous syphilide (*lepra syphilitica*), a purulent point makes its appearance; or, otherwise, their circumference is in parts traversed by irregular sero-purulent looking bands. Small scabs, the form of which is in accordance with that of the purulent deposit beneath the epidermis, to which they are due, then cover a portion of the surface of the patches, which continue squamous over the rest of their extent. After the detachment of these incrustations, and of the altered epidermis, slight excoriations are perceived, which, in their turn, are succeeded by superficial cicatrices. Nothing of this kind is observed to happen in connection with patches of common *lepra*. Indeed the squamous syphilide itself, unless when thus complicated with accidental pustules, is never followed by excoriations or cicatrices.

900. When the squamous syphilide appears between the buttocks, on the scrotum, about the navel, and over the upper parts of the thighs, where two contiguous surfaces of integuments are in contact, the patches present a very different appearance; their surface is then soft, moist, covered with a whitish unctuous and fetid matter, and the cuticle, instead of desquamating, is continuous, smooth, and of a dull white or grayish colour.

901. Of all the forms under which syphilis shows itself upon the skin, the *tubercular* is the most frequent.<sup>2</sup> Syphilitic tubercles are of a livid or coppery red colour, *smooth*, or covered with *squamæ*, *flat* or *prominent*, *dry* or *moist* on the surface, sometimes supporting *fungous growths*, frequently occupied by *circumscribed ulcerations*, and covered with thick scabs, or degenerating into *extensive sores* of a phagedenic or serpiginous character, hidden under rugous and broad incrustations.

Syphilitic tubercles appear *scattered* or *clustered*, or arranged in circular bands, which circumscribe, more or less completely, spaces of the skin, which is indifferently healthy, or altered in a greater or less degree.

902. We occasionally observe on the face, especially on the cheeks and *alæ nasi*, a number of oval or pyriform tubercles, very prominent, of various sizes, from that of a pea to that of a small olive, either *clustered* together, or irregularly disseminated over a surface of variable extent. Smooth and shining on their surface, they do not show

<sup>2</sup> Massa certainly points out tubercles as a species of pustulæ.—“*Demonstrativa (signa morbi gallici) sunt pustulæ cum quadam duritie, aut eminentia, et malo colore in capite toto, vel fronte circa originem capillorum, vel in aliis corporis partibus, et maxime in angulis oris, et hoc sæpe in infantibus accidit, et in adultis quandoque, quæ sunt eminentes humidæ.*” (Aphrodisiacus, p. 46.) The word *pustule* has likewise been employed as a generic term, to indicate several different alterations of the skin, such as squamæ, pustulæ, tubercula, &c., by almost all the writers who described the epidemic syphilis of the fifteenth century, as well as by those who have followed them. Leoncini, however, has made use of the word *tuberculum*. (Aphrodisiacus, p. 38.)



any thing like desquamation; neither do they occasion pain; and they may continue for months, and even for years, without undergoing any change. They seldom or almost never ulcerate; but, in the course of time, the cuticle upon their surface ends by exfoliating. This is the rarest of all the tubercular syphilitic eruptions. It is not uncommon, however, amid the more ordinary forms of the tubercular syphilitic eruption, to distinguish a certain number of tubercles which continue stationary, whilst those in their vicinity are desquamating, or falling into a state of ulceration, and becoming covered with scabs.

903. Instead of being even, smooth, and shining, like the tubercles that have now been described, syphilitic tubercles are occasionally affected with a true desquamation of the cuticle covering their surfaces (*squamous tubercles*).<sup>1</sup> A single tubercle of this description is occasionally observed to be developed on the upper lip, along with other symptoms of syphilitic infection. Or, a number of smaller tubercles, but little larger than papulæ, are often seen clustered upon one of the alæ of the nose, a situation in which, if the disease be left to itself, rhagades and fissures are formed at a later period. These squamous tubercles are often disposed like a wreath, or in the form of a ring, upon the forehead and neck. A series of round tubercles, as large as peas, and of a coppery colour, are frequently seen, accurately arranged side by side, and forming complete circles of varying diameter. From the summits of these, and occasionally even from almost their entire surface, a small, dry, hard, and grayish-coloured disc is detached. This desquamation does not take place from the whole of the tubercles at the same time, and every trace of it may disappear after the use of the tepid and vapour baths. The tubercles then look smooth, like those of a stationary nature, but they are never so prominent as these last. The skin of the interior of the rings is generally healthy. When the constitutional disease is yielding to appropriate treatment, the tubercles shrink; they approach more and more nearly to the level of the skin; the exfoliation becomes less and less conspicuous, and before long, nothing more remains than a reddish or yellowish stain, which, in its turn, vanishes likewise.

904. A particular variety of tubercle, the flattened form of which distinguishes it from all the others, is frequently spoken of under the name of the *flat tubercle*. This variety is most usually developed on the genito-anal region, and is always moist and often excoriated. Upon the scrotum, on the penis, on the pubes, on the anterior and inner parts of the thighs, the round or oval-shaped tubercles of this description occasionally attain a size little less than that of a shilling. They are sometimes several lines in thickness, and stand out in very prominent relief upon the integument of the verge of the anus, of the labia majora, &c. Their surface swells, becomes wrinkled, often presents linear excoriations, and secretes a dirty white, and faint and sickly smelling matter. These tubercles are sometimes clustered around the anus, so as to form a large ring, flattened, but still pretty prominent, whose sanious surface is traversed by numerous chaps and crevices, the deepest of which sometimes penetrate even into the cavity of the rectum. It more frequently happens, however, that these tubercles are evolved at some distance from the edge of the anus, and this is one among several other circumstances, which serves to distinguish them from hemorrhoids.

When these tubercles are neglected or improperly treated, when the fetid discharge they pour out is left bathing their surface, the wrinkles they present are not only transformed into deep chaps, but into ragged ulcers, the appearance of which is grayish, eroded, and granular, like that of several other syphilitic sores. The edges of the tubercles swell, and become more prominent, whilst their centres appear depressed. Under the influence of appropriate treatment, on the contrary, these tubercles shrink, the fluid they secrete diminishes in fœtor and in quantity, and ceasing at length to discharge, a slight exfoliation of the epidermis takes place from their surface, which goes on during a certain time.

The *scrotum* is occasionally covered with these tubercles. They are in general isolated, of an exact round figure, extremely prominent,

and furrowed or wrinkled on the surface by the natural inequalities of the part.

On the glans penis, the inner surface of the prepuce, of the labia majora, and minora, on the commissures of the lips, in the inside of the mouth, &c., these tubercles, instead of the deep red colour which they present on the inner and upper aspects of the thighs, on the body of the penis, and other regions, have a bluish-gray tint, owing to a thickening of the epithelium covering these parts. Between the toes too, this flat description of tubercle appears under the form of small whitish or grayish, and prominent patches, often excoriated in the centre, and accompanied with rhagades between the digits. These patches differ from the corns that are sometimes developed between the toes,<sup>2</sup> by being attended with a greater degree of puffing of the corion at their base.

About the commissures of the lips, this same description of tubercle does not commonly exceed the size of a large lentil, divided across its middle by a furrow which frequently changes into a chap. The nipples of woman who have become infected by suckling a syphilitic infant, are sometimes covered with flat-shaped tubercles, which the continued suction of the child causes to chap, to become excoriated, and to inflame in a very painful manner. These tubercles in some cases even ulcerate to a greater extent than they are ever observed to do in any other part of the body. Upon the navel, and within the meatus auditorius externus, these tubercles have nearly the same smooth and reddish appearance which they present on the inner and upper parts of the thighs.

905. The flattened tubercles of the scrotum and vulva are occasionally mixed with other forms of tubercles, which are covered with true *fungous growths* (*vegetations*).<sup>3</sup> These excrescences never attain such magnitude as those which are designated by the titles of *cauliflowers* and *cock's combs* (*choux-fleurs* et *cretes de coq*.)

906. On the hairy scalp, the flattened syphilitic tubercle appears under the form of spots of a reddish-yellow colour, nearly of the size of a silver three-pence, and covered with minute yellowish, and occasionally greenish squamæ. On applying the finger to the surface of these patches, it will be discovered that they are produced like those of syphilitic lepra, by a positive increase in the thickness of the skin; but their centres are not always depressed. These flat-shaped tubercles often form a band on the upper part of the forehead, and towards the roots of the hair, which spreads regularly over the temples; they are apt to ulcerate and become covered with thick scabs.

907. Other tubercles are of a nature essentially disposed to ulcerate, and form a very remarkable group, to which several varieties belong (§§ 908, 909, 910, 911, and 912.)

908. Upon the forehead and those parts of the cheeks which, in men, are covered with the beard, are sometimes seen a number of olive-shaped and very indolent tubercles, of a coppery hue, the surface of which is traversed by a small sinuous and irregular furrow that appears perforated and worm-eaten in parts. Upon these sinuous furrows and within these small holes, little greenish scabs are formed of a very adhering nature. The particular character of these small ulcers, is their linear disposition and the little tendency they show to unite, even when they are contiguous. After the shrinking and healing of these tubercles, the surfaces which they have covered appear stained, and covered with cicatrices, like those of serpiginous syphilis in miniature.

909. We sometimes see developed on the skin of the elbow, upon that which covers the head of the fibula, on the ridge of the nose, &c., circular or semi-circular clusters of tubercles, three or four lines in diameter, slightly elevated in the centre, and of a very deep livid or violet hue. Inflammatory action is before long set up in the tubercles, in the middle of these groups, or in those at the greatest distance from the edge of the clusters, as a consequence of which a purulent point is formed on their summits, that afterwards dries up into a black or brown-coloured scab. These tubercles shrink and leave violet-coloured blotches covered with minute cicatrices, surrounded by a raised and

<sup>1</sup> These are apparently the tubercles which Fallopius has indicated in the following passage:—At major pars (pustularum) nihil sub se continent, et præcipue quæ nascuntur in capite, rotundæ sunt, crustamque habent tenuem; quoties ego video pustulas in capite aut rhagades in manibus, indicium certum profero Gallici; cætera signa fallunt nos, hæc certissima sunt. (Aphrodisiacus, p. 824.)

<sup>2</sup> "Si vero in dictis ulceribus superficialibus, et præsertim pedum, essent aliquæ materiæ induratae ad modum clavorum," etc.—(Torrella. De ulceribus in pudendagra, tractatus. Aphrodisiacus, p. 540.)

<sup>3</sup> These fungoid tubercles are mentioned by De Vigo: "Pustulæ crustosæ et interdum cum carnositate elevata ad modum verrucæ super frontem, caput, collum, et faciem, brachia, et tibias et fere per totum corpus diffusæ."—(Aphrodisiacus, p. 449.—Devergie, op. cit. pl. 17.)



very well-defined tuberculous circle or arch, which is extended and increased by the addition of new tubercles, in the manner of eccentric eruptions generally. If the disease is allowed to run its own course, the middle tubercles of these clusters ulcerate more and more, and after a certain lapse of time, when the healing of the ulcers has taken place, the skin presents livid cicatrices of a circular or semi-circular shape, traversed by whitish bands, surrounded by a circle of tubercles, or edged with a tubercular arch, on which are often seen small angular ulcers, sometimes covered with scabs, the shrinking and healing of which do not take place till a much later period.

910. Broad syphilitic ulcers<sup>1</sup> which have entirely destroyed the skin and subjacent parts, are sometimes seen at the angles of the mouth, about the *alæ nasi*, or on the cheeks, and more rarely on other parts of the body. Similar ulcers sometimes begin, as I have ascertained in several cases, by broad tubercles which ulcerate at the top after having remained stationary for a considerable time. Several of these tubercles, three, four, or a still greater number, often appear almost at the same time on one of the places which I have just mentioned; their bases soon join, they suppurate at the top, and the various small ulcers thus produced, by uniting, give place to a sore whose edges, hard, livid, raised, and tubercular in some parts, jagged and angular in others, are deeply cut as if with pinking irons. The surface of this ulcer, of a yellowish-gray colour, and bathed in a sanious pus of a bad description, is uneven and beset with reddish points, but not very painful. If an ulcer of this description is left exposed to the air, it becomes covered with a yellowish brown-coloured incrustation, which is deeply set within the rim of the sore. When this scab is pressed, a sanious fluid often exudes from some point in the circumference of the sore, where the ulcerative inflammation appears most active. These sores generally show a disposition to destroy parts both superficially and more deeply; they are succeeded by irregular cicatrices, and often by considerable deformity.

Tubercles of the description that engage us are often evolved on the *alæ* of the nose, and end in phagedenic ulcers, which occasionally destroy no more than the skin; these sores are followed by deeply depressed cicatrices. When both of the *alæ nasi* are implicated at once, or when an erysipelatous inflammation of bad character takes possession of these parts, they are apt to be completely destroyed by the ulcerative processes, the energy and rapidity of which can then only be compared to what is observed in certain cases of lupus. Lastly, cases occur in which the syphilitic inflammation is propagated, even into the nasal fossæ, causing ulceration of the pituitary membrane, the destruction of the cartilages, necrosis of the *ossa nasi*, turbinated bones, &c., and occasioning a characteristic deformity of the most hideous description.

911. The title of the *serpiginous syphilide*<sup>2</sup> has been given to the secondary venereal ulcers which appear most commonly on the back, and pursue their course superficially in lines or in spirals in different directions. Ulcers of this description are also observed on the extremities and in the neighbourhood of the great joints. These ulcerations usually commence with a tubercle, of a ruddy violet or livid colour, oval and deep, which, after remaining stationary for a considerable time, inflames and suppurates, and is replaced by a deep ulcer, the dimensions of which do not exceed that of the tubercle. But this ulcer shortly spreads either at one end or the other: it forms a deep furrow, often the width of the little finger, which extends further and further, sometimes forming a complete circle, which circumscribes a larger or smaller surface of healthy skin; at other times taking the form of the letter C. or E., as in psoriasis gyrata, or irregularly circumscribing almost all the skin of the back, or of the interior parietes of the abdomen. It is worthy of notice, that whilst these serpiginous ulcers are making their way on the skin, by spreading in this manner from one end, they cicatrize at the other, even when no treatment has been had recourse to to stop their progress. These ulcers that appear in grooves or furrows, independently of this particular form, have other

special characters; they are attended with little or no pain; inflammation extends very little way beyond their edges; and they are sharply and deeply cut.

The discharge in which these large ulcerated grooves are bathed, dries in yellowish or light brown scabs, upon exposure to the air. These scabs are interrupted here and there along the furrows, by ulcerated surfaces, bathed in pus. When these serpiginous ulcers are seen on the back, on the belly, or the legs, arranged in large rings, the diseased skin almost always presents a mass of ulcerated circles covered with brown scabs, furrows whose edges are bathed in pus, and deep cicatrices in narrow stripes of a bluish or whitish hue, according as they are of more ancient or more recent date. This variety of syphilis is very rebellious.

912. Serpiginous ulcers are sometimes seen in arcs or circles, which, while their internal edge cicatrizes, spread in an eccentric manner from their external edge, so as always to preserve the form of a furrow in attacking the surrounding parts.

Lastly, consecutive ulcers are sometimes developed on the trunk, and more frequently on the face, which, in their progress, partake, at the same time, of the character of the eating ulcer of the angles of the mouth and of that of the serpiginous ulcer; this description of ulcer has been designated, under the name of the phagedenic consecutive ulcer.<sup>3</sup>

It is seldom observed at its commencement. When it is developed on the face, a swelling of a tubercular nature sometimes appears on one of the cheeks, followed by erysipelatous tumefaction; the skin becomes of a ruddy violet colour and shining; the little hard and circumscribed point which appeared primarily, suppurates and ulcerates; small analogous ulcerations often form in the same manner not far from each other; some become covered with a yellowish-brown scab, which adheres pretty firmly, and continues long attached to them; upon other ulcers in the neighbourhood of the angles of the mouth, the secretion of pus is too active and abundant to allow any scabs to form, or the natural motion of the parts tends constantly to detach them. These ulcers increase in the same manner as the phagedenic ulcers of the angles of the mouth. Others, arising near the zygomatic arch, extend towards the lower edge of the jaw and follow its contour; a thick matter of a yellowish-white colour, formed by mortified cellular tissue, sticks to their bottoms; their hard edges differ from those of ordinary serpiginous ulcers, in the skin that surrounds them almost always undergoing change, and becoming covered with squamæ and scabs, or being traversed by bands, and marked with cicatrices. When the face has been thus scarred by several phagedenic ulcers, it frequently becomes the seat of an erysipelatous swelling, sometimes preceded by pretty severe febrile symptoms, after which the disease is improved or aggravated according to the state of the constitution. When the cure of this frightful malady has been effected by methodical treatment, the face does not present, as after serpiginous syphilis, regular cicatrices in the form of bands; it is seamed rather, traversed with cords, as after burns or the lupus exedens, which destroys the skin superficially.

913. Small tumours are often developed in the subcutaneous cellular tissue, particularly in that of the limbs, about the size of a pea, movable, not painful, and not causing the skin to change colour, (*subcutaneous syphilitic tubercles*). They subsequently increase in size, inflame, contract adhesions with the skin which covers them, and become red. These tubercles then soften and perforate the skin; the result of this is the formation of small ulcers, whose edges are loosened, and whose openings are narrower than their bottoms, which are of a yellowish or dirty white.<sup>4</sup> This appearance is the effect of a sort of slough, formed of mortified cellular tissue, which sooner or later is detached, and leaves bare a red unequal surface, that continues

<sup>3</sup> This is the *ulcus manducativum* of Torrella; several ancient writers, and of late Carmichael, have designated it under the name of the phagedenic ulcer.

<sup>4</sup> Ego sæpe studiosâ aperui pustulas morbi gallici, et quamvis extra apparebant rubicundæ, vel alterius coloris, apertis tamen, in basi et in profundo erat quædam materia alba, densa, viscosa, . . . hanc eandem materiam videmus quotidie in apostematibus duris, quæ vulgares gummata appellant. (Nicolaus Massa. *De morbo gallico*, cap. iv. Aphrodisiacus, p. 43.)—Filius-familias cladem gallicam patiebatur. . . . sed de repente centum pene locis tubercula apparuerunt atheromatibus similli, et parvarum lupinarum instar. Ballonii. *Paradigmata* 20. Oper. Omn. Ed. J. Stewart, 4to., Geneva, 1762, t. ii. p. 527.)—Cullérier. *Art. Gomme syphilitique*. (Dict. de méd. et de chir. pratiques.)—Bacot. (Lond. Med. Gazette, vol. iii., p. 149, 1829.)

<sup>1</sup> Rubræ aut flavæ pustulæ, primùm quidem circâ frontem ac tempora, poneque aures, dein in capite atque etiam in reliquo corpore, erumpunt et extuberant rotundo schemate, siccæ, sine pure, quæ dein sicca crusta obducuntur: atque si negligantur, serpunt in ambitum, excavantque cutem, dum ex pustula verum ulcus fiat.—(Fernelii *Universa medicina*. Coloniae Allobrogum, in-fol., 1670, p. 585.)

<sup>2</sup> Massa, Torrella, &c., have spoken of this species of ulcer under the names of *ulcus ambulativum*, and *ulcus esthiomenum*.



to be bathed in pus of a bad description. These ulcers may assume a better appearance, but the redness of the granulations is generally hidden beneath a layer of whitish matter, as if their surface had been touched with a weak solution of nitrate of silver. These ulcers left to themselves extend slowly, and almost always by the destruction of their loosened, livid, or violet-coloured edges. When an ulcer of this kind remains exposed to the open air, it becomes covered with a brownish-yellow scab, deeply set within its edges; it may become sanious and bleeding from walking, if seated on the lower limbs. When these tubercles are thus ulcerated, and when the disease has lasted for a month or longer, other subcutaneous tubercles in different stages, and a number of cicatrices are always met with scattered over the limbs.

914. After the development of one subcutaneous tubercle, more frequently after it has become softened, and ulceration has taken place, several others appear in its neighbourhood, which in their turn soften and burst the skin. When similar groups of subcutaneous tubercles form on the legs, the skin becomes of a very deep violet-red colour, in the spaces between them, and the perforations which they make are often so near to each other, as to give the skin the appearance of a sieve.<sup>1</sup> Two or three of these ulcers sometimes terminate by uniting, and giving place to larger and more irregular ulcerations. Between the ulcers, the subcutaneous cellular tissue often swells unequally, and forms hard and prominent ridges, of a still deeper tint than that of the surrounding skin, which stretch away from the clusters. When the cure is completed, the skin of the legs remains marked with large yellowish or violet-coloured blotches, intersected with circular-shaped depressed cicatrices, and only recovers its natural colour and former pliancy very slowly, and after a long interval has elapsed.

915. Besides the sores which follow pustules, tubercles, &c., there are other cutaneous ulcers which succeed gummy tumours (*tumeurs gommeuses*), thickenings of the periosteum, caries of the bones, inflammations of the lymphatic glands, &c. Thus the tumours with soft centres and hard edges, which are evolved upon the superficial bones, more especially on the os frontis, having been preceded and accompanied by nocturnal pains, are followed by perforations of the skin, the edges of which are extensively detached, whilst the bottoms of the sores look grayish or white, and are often occupied by the bone naked and in a state of caries. These ulcers are never healed but very slowly and with extreme difficulty.

916. Chronic syphilitic inflammation of the lymphatic glands of the neck and axilla, is not only followed by considerable enlargement of these glands, but in many cases by *fistulous ulcers*, the edges of which are hard and livid, and the bottoms grayish. Sores of this description are also very rebellious, although less serious in their nature than those last mentioned.

The fistulous ulcers that follow venereal enlargement of the testis rarely become extensive.

917. I must here also give an account of the appearances presented by ulcers of venereal origin, developed on the external organs of generation. After the consolidation of chancres, we frequently see the cicatrices giving way, and the ulcers now formed more frequently assuming the aspect of secondary than of primary syphilitic sores. Secondary sores may also be, and indeed frequently are evolved on the penis and pudenda, in consequence of venereal eruption upon these parts with an ulcerating tendency. These sores are generally circumscribed with tubercular bases; sometimes, however, they have the characters of *serpiginous* ulcers, which traverse the skin of the penis and scrotum in circles, and zigzag lines; and in a few rare cases they show the *phagedenic* tendency, when they destroy, both superficially and in depth, a greater or less extent of the organs of generation.

918. In those who are labouring under constitutional syphilis, *leech bites* are occasionally known to be followed by sores, which acquire all the characters of secondary syphilitic ulcers, and become covered with scabs, very similar to those of the ulcerated phlyzacious syphilide. The bites of leeches, applied in the vicinity of the genital

organs, in the treatment of primary venereal sores and buboes, are also occasionally observed to degenerate into ulcers of a venereal aspect; and it is a very remarkable fact that, in the same individuals, or in different circumstances, the bites of leeches rarely change into venereal sores, when the animals have been applied to parts remote from the genital organs: this remark has already been made by M. Desmellés.

919. When secondary syphilitic ulcers are long kept in an irritable state, by means of stimulating applications, or indulgence in wine, rich food, &c., in individuals disposed to cancerous affections, the diseased parts harden, become covered with yellowish excrescences, and are attacked with acute lancinating pains (*degenerated venereal ulcers*).

920. Secondary venereal ulcers have also been frequently observed on different mucous membranes. Those of the velum palati, of the uvula, of the posterior surface of the pharynx, of the tonsils, &c., are by much the most frequent of any; but they are also encountered on the gums, on the inner aspects of the cheeks, in the vagina, &c. Like secondary venereal ulcers in general, those of the throat are not painful, and patients are frequently only admonished of their existence by the difficulty they experience in speaking or in the act of swallowing. The bottom of these ulcers at their outset, is of a grayish-white, like that of primary venereal sores. The colour is due to the presence of a layer of solid matter, proceeding from a kind of mortification of the tissues. This kind of eschar is very superficial at first, and resembles a strongly adhering false membrane; by and by it is detached, and leaves exposed a deep and well-defined ulcer produced by this loss of substance. This chancre-like inflammation frequently occasions the destruction of the uvula and velum palati.

In other cases these pharyngeal ulcers are preceded by flat tubercles; their progress is then less rapid. After the cure of venereal ulcers of the pharynx, cicatrices of a bluish tint, but which become white in the course of time, are observed on the surfaces they occupied. In some cases, moreover, considerable deformity of the pillars of the velum palati are observed to ensue. These parts are very apt to contract adhesions with the posterior parietes of the pharynx.

On the inner aspect of the cheeks, along the edges of the gums, and on the palatine arch, venereal ulcers frequently present the serpiginous character; their edges, which are irregularly jagged, and their surface, almost always present a bluish-white cast of colour, very distinct from the usual colour of venereal ulcers of the throat. The serpiginous venereal ulcer of the inner surface of the cheeks, like that of the skin, frequently heals up at one end whilst it is advancing by the other. When completely whole, the cicatrice is often torn by the motions of the parts occasioned in speaking and mastication.

Ulcers and their cicatrices are occasionally seen in the vagina, and even in the œsophagus and larynx. Ulcers of the nasal fossæ coincide for the most part with affections of the bones of these parts or of the arch of the palate.<sup>2</sup>

<sup>2</sup> Some cases go to prove that syphilitic ulcers may be evolved in other parts of the internal mucous membranes. Joubert tells us that he had observed them in the trachea; and ulcers of the large intestines have been discovered in the bodies of those who either died whilst labouring under constitutional syphilis, or who had, at some former period of their lives, suffered from this cause, which bore a great resemblance to syphilitic serpiginous ulcers of the skin. Although the following case may not be held conclusive, I am tempted to state it briefly: A man about thirty years of age, and of fair constitution, was recommended to my care at the Hôpital de la Charité, on account of a disease of the great intestine, which was accompanied with the excretion of a certain quantity of pus, which was at one time passed along with the feces, and at another came away pure or mixed with blood. The finger, passed up the rectum, detected neither stricture nor swelling. M. Costellat, by means of his improved bougie (*porte meche*), showed us that the ulcer was situated at the upper part of the rectum. The patient's appetite was good, and there was no visible derangement in any other part of the intestinal canal, nor in any other apparatus of the system. The patient had not observed that his evacuations were purulent for more than seven or eight months; he made no complaint of pain in the abdomen, and very strong pressure was required over the recognized seat of the disease to cause any even there. The absence of acute pain, and of all the other general symptoms proper to cancerous affections, did not allow me to entertain the idea that the ulcer was of this nature; but it was in vain that I persevered during the course of two months in the use of every means I thought likely to bring about the cicatrization of the sore—no progress seemed to have been made in the cure. The patient having at a former period laboured under a venereal affection, although there was now no evident symptom of the disease, I determined on trying the effect of the pills of mercurial ointment, (three of Sedillot's pills daily,) and in the course of a fortnight, under the influence of this remedy, the purulent discharge began to diminish, and at the end of two months ceased entirely, when the cure appeared to be complete.

<sup>1</sup> Massa speaks of ulcers which unite the principal characters of consecutive ulcers with those of subcutaneous tubercles: "Ulcera perforata multis perforationibus."—(Aphrodisiacus, p. 45.)



921. Although the appearance of secondary syphilitic ulcers is very nearly the same as that of primary sores, many, since the publication of Mr. Hunter's experiments, have imagined that the nature of these two species of ulcer was not identical; that primary sores were contagious, for example, and that secondary ones were not. Still, the greater number of observers admit, with Hunter, that both of these varieties of ulcer, especially the latter, are advantageously treated by the exhibition of mercury. This circumstance has been held by other practitioners as a sufficient proof of identity in the nature of these ulcers, and they have admitted all indiscriminately as contagious. (a)

922. On the mucous membrane of the genital organs, around the anus, more rarely on the common integument of the body, and on the mucous membranes of the nipples, of the mouth, pharynx, &c., we frequently observe excrescences evolved in the form of warts, cocks'-combs, cauliflowers, &c. These are due to morbid thickening of the corion, vascular rete and epidermic lamellæ, and to increase of size in the papillæ of the skin.

These excrescences are of two descriptions: syphilitic and non-syphilitic. To distinguish them, attention must be paid to the situation in which they are evolved, to the previous state of the surface upon which they have appeared, to their progress, and to the coincidence or otherwise of syphilitic symptoms generally, rather than to the physical characters of the growths themselves, which generally bear the greatest resemblance to each other, whether they be specific or not. Hunter<sup>1</sup> and several other writers have denied the existence of any excrescence *truly syphilitic* in its nature. They regard the whole of these growths as the consequence of simple inflammation, and rest this opinion mainly or altogether on the fact of the little influence possessed by mercury in their treatment. But if the inflammation of chancre has the power of causing what may be called primary excrescences, numerous cases leave no doubt of the fact, that certain excrescences are owing to the *syphilitic cachexia*, and that they sprout without evident inflammation.

(a) "The general proposition, that secondary syphilis in all its stages is incommunicable, is liable to some exceptions. A mother labouring under syphilis may communicate it to her child *in utero*, and the child may be infected after birth by a nurse who has at the time syphilitic ulceration of the nipples, or by its mother under the same circumstances, if the disease of the nipple have been derived from a strange child; but we are told, curiously enough, that no instance is known of a child, diseased in the manner just specified, infecting its own mother, although it will readily transmit the syphilitic disorder to a strange nurse. A woman thus affected, and in whom, together with ulceration of the throat and cutaneous eruptions, there are moist excrescences about the pudenda, may transmit the disease to the husband. Dr. Colles believes that the secondary form of syphilis may be farther imparted to other members of the family, by contact, use of the same utensils, &c. He asserts that its contagious property, but not its virulence, increases in proportion as it extends farther from its source."—*Bell & Stokes's Lectures, &c.*, pp. 565-6, vol. ii., 3d ed.

As regards the order of causation in syphilida generally, there is no little difference of opinion. M. Cazenave asserts, that they may appear simultaneously with the primary disease, chancre, gonorrhœa, &c., and hence be themselves primitive, as well as, a more common case, occur after a longer period from the first infection, being then secondary or consecutive syphilida; or, finally, be congenital, constituting hereditary syphilida. This author, like Carmichael, contends that syphilitic eruptions may ensue on simple gonorrhœa, and even, as it would seem from some estimates, more frequently after this disease than chancre. The period of incubation, or that between the primary infection and the appearance of the syphilida, has been stated in the text (§ 856 and note). M. Cazenave makes the average about five years; and their early development most probable after chancre complicated with bubo. The papular and exanthematous syphilida appear in the shortest, and the tuberculous in the longest period after the primary disease.

Excrescences of the description under review have been met with in many parts—about the verge of the anus, on the navel, on the wrists, near the angles of the mouth, around the neck, &c.

About the *verge of the anus*,<sup>2</sup> they have always a broad base, and generally extend in the form of broken arcs of circles or imperfect rings; they are flattened, nearly of the same colour as the skin, often moist on the surface, and the neighbouring integument is occasionally red and slightly excoriated. When one of these warty bands is put upon the stretch by drawing the skin opposite ways, especially in the direction of its breadth, the surface is made to exhibit a great number of clefts, some of which, deeper than the rest, show themselves as true rhagades. Those excrescences, the surface of which looks flattened, are occasionally formed by a succession of foliaceous prolongations applied one over the other. When they are removed with a knife, they are found to be formed by an hypertrophy of the corion, the development of which has not been equal at every point. Under the magnifying glass, this inequality of development is very apparent; the vessels which shoot into the different points of excrescence, are, however, generally obvious even to the naked eye. The cuticle which covers them is frequently softened.

The excrescences with broad bases are very distinct from those fungous tubercles upon which excrescences are only evolved after they have fallen into a state of ulceration.

In the *perineum*, excrescences occur more rarely than they do about the margin of the anus. They are oftenest seen extending along each side of the raphe, and have all the characters of those of the fundamen-

I have met with syphilitic excrescences surrounding the *wrist*,<sup>3</sup> in the shape of a broad band, and forming a kind of warty nap or pile, by the assemblage of an infinity of minute papillary prolongations, several lines in length, redder than the surrounding skin, and in several places covered with a cuticle of considerable thickness. The excrescences that are occasionally observed about the *alæ* of the nose, on the eyelids, or in the meatus auditorius externus, approach in their general appearance to those of the wrist and perineum.

Cutaneous excrescences may show themselves, especially on the neck, under another guise, that namely of small flattened tumours the size of a lentil, of a yellowish or brownish colour, soft to the touch, not cleft on the surface, and in which the morbid growth of the corion appears to have taken place evenly and in circumscribed points.

923. Excrescences of the *mucous membranes of the genital organs*<sup>4</sup> appear most frequently among men, in the depression which separates the corona glandis from the prepuce, sometimes on the prepuce itself, more rarely on the glans itself, or about the orifice of the urethra.

<sup>2</sup> The excrescences, with broad bases which are evolved in the neighbourhood of the rectum, were known to, and have been more or less accurately described by, the ancient authors, under the name of *thymi* and *condylomata*. (Celsus, *de re medicâ*, lib. v., sec. 18, 8. Lib. vii., sec. 30.—C. Plinii. *Sec. Historiæ mundi*, lib. xxx. c. 8. fol. Lugduni, 1587.) Galeni Opera, fol. Bâsil, 1562. CI. iii. p. 170, et chap. v. p. 411. Cælius Aurelianus, *de morbis acutis et chronicis*, J. Conrado, edente, &c. Amstelodami, 4to. 1549, p. 393.—Ætius, *Tetrabiblos*, editio Cornarii: Bâsil, 4to. 1749, de affectionibus sedis, p. 739.—Paul Æginetæ. *Opus de re medica*, lib. vi. cap. 80, Parisiis, 1532. Ætius has given a good description of the other species of excrescences which appear round the anus, under the name of *thymi* and *sycois*.

"*Thymi* enim in corpore tuberculosæ sunt eminentiæ, asperæ, subrubræ, oblongæ, præter naturam auctæ, sanguinem effundentes dum auferuntur amplius quàm pro apparente magnitudine. Abundat autem hæc affectio circa sedem et pudenda ac media femora. Quandoque etiam in facie constitit. Et quidam sane parvi sunt et vocantur thymi: aliqui vero magnitudine excedunt, et appellantur ficus. Mansueti igitur thymi, carunculæ sunt parvæ quidem, verum inæquales, obscuris eminentiis exasperatæ, albicantis coloris, aut subrubræ et doloris expertis... Medicamenta quæ consumunt ac resiccant thymos, sunt ea quæ communiter curant etiam reliquas verrucas." (Op. cit. p. 741.) These excrescences appear even to have been known to the Roman poets: "Sed podici lævi cœduntur tumidæ medico ridente marescunt" (Juvenalis. *Satyr* iii.) Celsus seems to regard them as the consequences of inflammation.

<sup>3</sup> An old man, who had had a dozen different attacks of venereal disease, came under my charge at La Charité, as affected with rheumatism. On the palmar aspect of the wrist, he had a large reddish spot, in shape something like a horse-shoe, the surface of which was beset with papillary warts covered with thick cuticle, which could be detached by the use of warm fomentations. They then appeared under the guise of a kind of *turf* or *nap*, very similar to those syphilitic excrescences which occur at the root of the glans. Were these excrescences syphilitic or not? They were certainly in a situation where such growths are rarely seen, and had all appeared in the course of the last five or six years.

<sup>4</sup> Excrescences of the penis appear to have been mentioned by Celsus: "Occalescit etiam in cole interdum aliquid, idque omni penè sensu caret quod ipsum quoque excidi debet." Ætius describes them more clearly: "De thymis in sede diximus,

<sup>1</sup> Hunter (J.) on the Venereal Disease, 4to. London, 1786. Part iv., chap. 5, sect. 4.—Cooper (S.) Dictionary of Practical Surgery, 6th edition, 8vo. London, 1830, Art. Wart.



Among women they occur most frequently on the inner surface of the labia majora, or at the junction on the labia minora. Different titles, such as *cock's-comb*, *cauliflower*, and *raspberry* excrescence, have been given according to the general forms and appearances of these growths, which often occur severally, but frequently also blended together in particular cases.

By *cauliflower* venereal excrescences are understood small reddish or whitish tumours, single or manifold, which arise from the membrane upon which they are developed, by means of a kind of peduncle or foot-stalk, and expand into a voluminous granular head, occasionally bleeding or covered with a puriform secretion. These excrescences, by their numbers or their size, impede in a greater or less degree the functions of the parts upon which they sprout. Thus, when they are evolved about the extremity of the prepuce in individuals labouring under phymosis, or when they nearly close up the meatus urinarius, they render the excretion of urine difficult. They have been seen evolved beneath the prepuce as large as a walnut, projecting in very strong relief externally, and accompanied with a fetid discharge. In some cases, too, in which the prepuce has chanced to be perforated by a syphilitic ulcer, venereal excrescences have been observed evolved near the corona glandis, which penetrating and passing through this opening, expanded greatly externally. In females, an extensive crop of these excrescences has been seen, obstructing the orifice of the vagina, and proving an obstacle to sexual intercourse and parturition, until removed by an operation.

924. On the surface of the tongue and in the throat, excrescences have frequently been known to exist, the nature of which was never ascertained. Excrescences of the cauliflower kind, have been known to occur in the pharynx,<sup>1</sup> and to attain such dimensions, that after having altered the voice, and impeded respiration more and more, they finally caused death by suffocation.

Cases in which excrescences of a venereal aspect were evolved on the inner membrane of the heart,<sup>2</sup> and great vessels, have been recorded. If, in some instances, there be a show of probability in considering such excrescences as syphilitic, there is not one on record in which they have been proved irrefragably to have been so; and on the other hand, it is undoubted that they have been met with in individuals who had never in their lives suffered from syphilis.

925. *Syphilitic alopecia or baldness, (Pelarola, Brassavolus),*<sup>3</sup> which sunt autem et hic thymi aut in sola glande, aut in cole, aut in præputio. Antea vero dictum est quod mansueti facile curantur, maligni difficiliter et per affectu partis ablationem sanantur."—(Opus cit. de thymis in pudendis, p. 748.) The historians of the syphilitic epidemic of the middle ages seem to have paid little attention to these excrescences of the genital organs and verge of the anus. Yet Fallopius describes them with care, and speaks of their proper treatment. He observes that they are consequent on ulcers: "Ultimo sanatur caries in pudendo, et solet semper loco cicatrices subescere quædam verruca, veluti caruncula," etc.—He distinguishes them into syphilitic and non-syphilitic.—"Harum (op. cit. p. 817), duplex est genus, aliud gallicum, aliud non gallicum, major pars non est gallica." He remarks, however, that excrescences not syphilitic may become contagious through negligence of proper cleanliness. (Of late M. Desruelles has given a very particular account of these excrescences in his *Second Mémoire*, inserted in the *Mém. de Méd. &c. Militaire*, vol. xxviii. p. 337.)

<sup>1</sup> Marcellus Donatus has given a case which is quoted by Schenckius (lib. i. de faucibus, obs. ii.). "Civis habitu corporis melancholico præditus verrucis quampluribus gutture, faucibus et radicem lingue occupantibus diu vexatus fuit."—Albucasis (Chirurg., lib. ii. cap. 36), relates the case of a woman, in whom excrescences in the interior of the throat impeded respiration and deglutition. Andral has given a case of growth within the larynx (Precis d'Anatomie Pathol., t. 2ème partie, p. 472). M. Ferrus showed a preparation very nearly similar to that described by Andral, at one of the meetings of the Acad. Royale de Médecine. I met with a third instance of the same kind at the Hôpital de la Charité, in the body of a woman, aged about fifty. The tumour was attached near the upper edge of the left ventricle of the larynx, and expanded above its upper orifice. M. Roux had already discovered this portion of the tumour with his finger; and its presence was farther proclaimed by a distressing dyspnoea, and a peculiar whistling of the air, especially as it entered the larynx in inspiration. Had not symptoms of inflammation of the lungs been detected, and led me to augur unfavourably of the result of an operation, M. Roux would have performed tracheotomy; and possibly this might have been done with success.

<sup>2</sup> Corvisart gives two cases of excrescences of a venereal appearance existing on the mitral valves of individuals who had been formerly affected with venereal diseases.—(Essai sur les Maladies, &c., du Cœur, 8vo. Paris, p. 217.) Lennec has described two species of excrescence of the lining membrane of the heart.—1st. *Végétations verruqueuses*; 2d. *Végétations globuleuses*; but he thinks we have no adequate grounds for speaking of them as syphilitic in their origin.—(Traité de l'Auscultation médiate, t. ii. p. 618, 2ème ed. Paris, 1826.) Messrs. Bertin and Bouillad believe that the influence of syphilis, in the production of these excrescences, has at all events been greatly exaggerated.—(Traité des Mal. du Cœur, 8vo. Paris, 1824, p. 232.)

<sup>3</sup> H. Fracastorius speaks of the loss of the hair and beard, as one of the frequently

was a frequent symptom of constitutional infection, during the latter half of the sixteenth and beginning of the seventeenth century, is at the present day one of the rarest phenomena of the disease. For more than twenty-five years, says Cullérier, during which I have seen from two to three thousand venereal cases annually, I have not met with more than three or four instances of general alopecia, and fifty or sixty of the partial affection.<sup>1</sup>

I have myself noted no more than a single case of general baldness from a venereal cause; but I have repeatedly seen the hair partially lost, among individuals who exhibited the characteristic symptoms of constitutional syphilis.

Syphilitic alopecia cannot be distinguished from the other varieties of the same affection, save by the nature of the symptoms which accompany or precede it; one of its most striking characters is its accompaniment by nocturnal pains in the bones.

926. The nails as well as the hair undergo several changes in consequence of venereal infection. We have to specify, 1st. Inflammation of their matrices, generally known under the name of syphilitic onychia; 2d. Certain changes of structure in the nails; 3d. Loss of the nails (*syphilitic ungueal alopecia*).

*Syphilitic onychia*<sup>2</sup> is observed to occur more frequently in the toes than in the fingers. Several toes are usually affected at the same time; and it is not uncommon to see the whole of them either simultaneously or in succession attacked with this kind of inflammation, which is almost invariably accompanied with unequivocal symptoms of general venereal infection; in some rare instances, the disease is seen expending its virulence almost exclusively on the matrices of the nails.

In the greater number of cases, the border which externally marks the root of the nail and extends along its sides, swells in one or more places without any great amount of pain. The swollen parts have a violet or livid red colour; after the lapse of several days, their surface becomes excoriated. It frequently happens, too, that a sero-purulent exudation takes place between the root of the nail, and the swollen roll of skin which covers it; ulcerative inflammation then commences, and destroys this fold of integument to a greater or less extent, and exposes almost the whole of the root of the nail. If the disease be left to itself, the neighbouring integuments swell, the edge of the ulcer becomes painful, and has a grayish colour; a sanious discharge lodging between the nail and its matrix, loosens it partially at first, and ultimately brings about its complete detachment. The matrix of the nail thus exposed, has the look of a sanious ulcer, surrounded by a red and swollen marginal roll, which, in one or several places, is the seat of ulcers often characteristic in their appearance. If no steps be taken to check the progress of the disease, the edges of the sore become fungous; shapeless horny productions are thrown out from the surface of the matrix on those places that have escaped ulceration; and in this state the mischief is always remedied with extreme difficulty; the

occurring symptoms of syphilis: "Et quod mirum omnibus visum est, capillorum, et reliquorum pilorum casus homines ferè ridiculos facit, aliis sine barba, aliis sine superciliis, aliis glabro capite in conspectum venientibus: quod infortunium prius putabatur ex medicaminibus evenire, præsertim ex argento vivo: mox certiores facti omnes, sciunt ex ipso morbo immutato procedere, quin immo (et quod pejus est) jam nunc multis videntur labefactari dentes, quibusdam etiam cadere (Opera omnia, 4to. Venetiis, 15-84. De morbis contagiosis, cap. ii.; de syphilide, p. 91). This symptom, which has been ascribed to the action of mercury, was consequently observed among individuals who had undergone no kind of treatment. Vide Forestus (De lue venerea, lib. xxxii. obs. 25), and the passage of Fracast. as quoted. Massa also speaks of the loss of the hair in syphilis: "Et quoniam inter quamplurima morbi gallici accidentia depilationes capillorum, barbæ, aliarum partium corporis," etc. (Aphrodisiacus, p. 103.) Ferri (De morbo gallico.—Aphrod., p. 438), J. B. Montanus (De morbo gallico.—Aphrod., p. 584), B. Victorius (De morbo gallico.—Aphrod., p. 645), G. Fallopius (De morbo gallico.—Aphrod., 822), L. Botallus (Luis vener. curandi ratio.—Aphrod., p. 875), D. Leonus (De morbo gallico.—Aphrod., p. 906), F. Frizimelia (De morbo gallico tract.—Aphrod., p. 998), and a great number of other authors speak of the phenomenon, with more or less ample details. On this the reader may farther consult Fernelius (De lue venerea.—Aphrod., p. 613), A. M. Brassavolus, (De morbo gallico.—Aphrod., p. 650), who make a distinct species of syphilis of it.

<sup>1</sup> Dict. des Sciences Méd. Art. Alopecie Vénéérienne.  
<sup>2</sup> In the *Aphrodisiacus*, several passages having reference to the loss of the nails may be found; but inflammation of their matrices is nowhere clearly mentioned. In latter times, Astruc, and several other authors have spoken of it, or have given cases: Delpech (Chirurg. clinique, 4to. Paris, 1833, t. i. p. 364: ulcération du contour des ongles).—Léclut (Etudes anatomico-pathologiques sur l'onglade).—Devergie (Clinique de la maladie syphilitique, 4to., t. ii. pp. 221, 403, Art. Onglade).—Récamiér (Revue Médicale, mars 1830).—Ratier (Journal Hebdomadaire, 2ème série, t. viii. p. 48).—Rynd. On onychia. (The Dublin Hospital Reports, t. v. p. 274.)



affection of the ungueal matrix has then gone to such lengths, that the production of a well-formed nail becomes impossible in future.

927. By contrasting these characters with those of scrofulous onychia, (§ 739,) little difficulty is usually experienced in distinguishing the two diseases from one another. With regard to primary syphilitic sores which have been occasionally seen evolved on the fingers, the venereal poison having been inoculated by means of a scratch or an abraded surface, they differ essentially in their progress from the chronic inflammation of the ungueal matrix, known under the name of onychia.

Syphilitic onychia does not always appear with characters so destructive as those which have been indicated: after the ulceration of the fold of skin which covers the root of the nail, this last is thrown off without the matrix itself becoming ulcerated; a new nail is ere long produced, the inflammation abates, and the disease goes on to recovery; but this amendment frequently proves no more than temporary, and the disease makes its attacks upon one or several others of the digits.

The distinguishing feature of this species of onychia is its occurrence independently of all appreciable outward cause. It is also very constantly distinguished in one case, by the grayish and eroded appearance of the sores; in another, by the other general syphilitic symptoms with which it is accompanied; in a great number of cases, however, the influence of mercurial preparations in its cure, is the final and irrefragable criterion of its actual nature.

928. According to Astruc,<sup>1</sup> the inflammation and suppuration of the ungueal matrices which constitute syphilitic onychia, may be preceded by an alteration of the nails themselves, which become hard, brittle, and similar to those we shall have occasion to describe in the following paragraph: this must be a very rare occurrence, however, for I have never met with it myself, and in all the writers I have consulted on the subject, I have observed no mention of a similar case.

929. Under the influence of an inveterate syphilitic infection, the nails occasionally undergo a remarkable change in their appearance and in their structure.<sup>2</sup> From their extremities, and to a certain distance upwards, they become thicker, drier, more brittle, and more opaque than usual; they are frequently of a yellowish-white colour, and exfoliate or throw off pieces from their surface, which then appears rugous, cracked, and uneven. The extent of this alteration is accurately shown on the nail by the change of colour in the part affected. I have had patients under my care, who, though they had repeatedly taken away with a file or pen-knife, almost the whole of the nails thus affected, assured me that the nails were constantly reproduced with the same alteration of structure, and the same general appearance. The act of cutting these thickened nails is almost always painful, on account of concussion given or traction exercised during the process being communicated to the root of the ungueal matrix.

This alteration of the nails is sometimes observed in different degrees, on those both of the fingers and toes at the same time. It

<sup>1</sup> Demum unguis, qui extremæ cutis appendices sunt, inæquales, crassi, rugosi, scabri fiunt, et obortus ad radices reduvius, panaritio, inflammatione, ulcere sponte decidunt: unde l'onglade.—(Astruc de Morbis veneris, 4to., lib. iv. cap. i. p. 333.)

<sup>2</sup> Contingit et in hoc gallico affectu unguium casus, quem ungiarolam vulgus vocat: affectus potius fœdus, quam dolorosus: nam decidunt unguis et capilli, ut dentes faciunt, et hic affectus nonnunquam capillorum casum sequitur, nonnunquam antecedit, tamen semper illum præcedunt, aut bubo, aut penis exulceratio, aut oris exulceratio, etc. (Ant. Musæ Brasavoli de radicis Chinæ usu tractatus.—Aphrodisiacus, p. 727.) Consult, in addition, Augerii Ferrerii de pudendagra, liber secundus.—Aphrod., p. 925; J. Hunter, Traité des maladies vénériennes, trad. de l'anglais, p. 340; Cullérier, Dictionnaire des sciences, med., Art. syphilis.

"Si quis unguis veluti leprosus habeat, hoc morbo gallico referat acceptum. Hæc autem affectio vulgo ab unguebus (onglade) vocatur."—(G. Rondolet. De morbo gallico.—Aphrodis., p. 939.) I was lately consulted by a man of vigorous constitution, aged fifty-four, who, when only eighteen years old, had contracted bubo and several chancres, which had got well under the use of mercurial inunctions and fifty-four days confinement. At the age of thirty-five, he contracted gonorrhœa, which, treated at first by emollients, and afterwards by the balsam of copaiva, was followed by pains in the joints. These went off, and he continued well till the age of forty-seven, when the nails of the feet began to change without pain: a yellowish dry matter was first deposited between the inferior surface of the nail and the corion; the nails themselves became in part yellow and brittle. Shortly afterwards the nails of both hands became affected in the same manner. These the patient filed away to near their roots, in the hope of seeing them reproduced of natural appearance. The alteration of the nails was speedily followed by plantar pains of such severity as to prevent the patient from sleeping. I prescribed a course of blue pill and tisan of Feltz; after three weeks the pains in the soles had almost ceased, and the nails were shooting forth much less altered in their appearance: every thing promises a speedy and complete recovery.

is frequently accompanied with considerable pain, which is complained of, especially during the night, and about daybreak, in the soles of the feet. I have observed this alteration of the nails in individuals who had formerly suffered under syphilis, and occasionally when no other trace of the disease remained. In these cases, I was only led to look on the alteration of the nails as engendered by a syphilitic cause, from finding that the pains which accompanied it, disappeared under the influence of the administration of mercury, and that the diseased nails were, after the course was completed, replaced by others of normal appearance.

This affection of the nails is extremely rare, and must not be confounded with that which occasionally occurs in the course of inveterate lepra, psoriasis, and pityriasis, and as a consequence of chronic eczema of the fingers.

Several authors mention a syphilitic alopecia, (*unguiarola* Brassavolus,) or loss of the nails without previous syphilitic local symptoms, in individuals labouring under constitutional syphilis.

930. Several writers mention the alteration and loss of the teeth,<sup>3</sup> (*Dentarola*, Brassavolus,) analogous to those of the nails, in consequence of a syphilitic taint of the constitution. Were I to decide according to my individual experience, I should say that such affections of the teeth were extremely rare at the present day; perhaps I have not investigated the point with all the attention necessary.

931. The whole tribe of syphilitic eruptions are frequently complicated with one another: it is common enough at the same time, and in the same individual, to meet with tubercles, squamous patches, papular eruptions, maculæ, &c. And these simple or complicated tegumentary affections, are almost always preceded and accompanied with a variety of other symptoms proper to constitutional syphilis.

932. Articular pains,<sup>4</sup> and pains in the bones, are the most frequent of all the symptoms of constitutional syphilis. Their distinguishing peculiarity is their greater severity during the night than during the day, and the readiness with which they yield to the administration of mercury. The more superficial bones, the tibiæ, the humeri, the cranium, the clavicles, &c., are the most frequent seats of these syphilitic nocturnal pains.

933. Syphilitic periostosis, exostosis, caries, and necrosis,<sup>5</sup> occasionally follow the cutaneous eruptions which are due to the same cause; always more obstinate than these last, they often continue

<sup>3</sup> These affections of the teeth, as symptoms of syphilis, are mentioned by the older writers: "Addit (de signis morbi gallici) corruptionem palati et dentium." G. Fallopii de morbo gallico tract.—Aphrod., p. 781.—Aug. Ferrerii, de pudendagra, lib. secundus, cap. ix. Ad commotos et infectos dentes.—Aphrod., p. 926. Itaque, si una cum pilorum defluvio, dentes unguisve decidunt... citra tamen unguentum ex hydrargyro, et suffumetum ex cinnabari utendum. (Alex. Sra. Petronii. De morbo gallico. Aphrod., p. 1336.) Others have spoken of the loss of the teeth; but it appears probable, from their mode of expressing themselves, that they intended to signify the loosening and loss of the teeth consequent on the destruction of the gums by venereal ulcers. "Et corrosione gingivarum et casus dentium causat." (A. Massa. De morbo gallico.—Aphrod., p. 103.)

<sup>4</sup> These pains, which, by some pathologists, have been attributed to the action of mercury, were frequently complained of on the first appearance of the epidemic syphilis, in the middle ages, shortly after the invasion of the disease, and before any kind of treatment had been tried: "Nicolaus minor Valentinus, mihi intimâ caritate conjunctus, ætatis xxiv., annorum fere, mediocris stature, atque habitudinis, de mense Augusti habuit rem cum muliere, habente pudendagram; quare eadem die ipse fuit eodem morbo infectus, quæ infectio incepit apparere in virgâ, ut solet ut plurimum aliis evenire. Nam sequenti die apparuit ulcus in virgâ cum quadam duritie longâ, tendente versus inguinâ ad modum radii cum sorditie et virulentia. Post sex dies, ulcere semicurato, arreptus fuit ab intensissimis doloribus capitis, colli, spatularum, brachiorum, tibiarum, et costarum, et præsertim sic eorum musculis cum maximis vigiliis a quibus molestabatur non nisi in nocte post primum somnum" (Gasparis Torrellæ. Consilia adversus pudendagram.—Aphrodisiacus, p. 548.) Invenit ei dormiendo in eodem lecto cum fratre suo infecto, et incipit a doloribus, tandem post duos menses, facto totâ die laborioso exercitio, in nocte, horâ quâ molestabatur a doloribus, a capite usque ad pedes correptus fuit a pustulis grossis, crustosis cinericeis, et postea non fuit molestatus a doloribus. (Ibid., p. 550.)

I have myself known pains of this description to occur in consequence of gonorrhœa, and other primary symptoms, which had been treated without mercury.

<sup>5</sup> "Corrosio mala ossis... fit que durities juncturarem cum tumore in morbo inveterato" (N. Massa. De morbo gallico.—Aphrodisiacus, p. 46.) Fallopius gives a more ample description, and appears to have been the first who broached the opinion, adopted by so many of the recent writers, relative to the influence which the use, and especially the abuse of mercury, has on the production of these affections of the bones. "Sæva valde est in morbo gallico ossium corruptio... ita ut totum viderim cranium exesum: ego habeo infinita exempla; sed aliquando etiam corruptuntur ossa palati, ut totum palati os recedat, et non solum palati ossa id patiuntur, sed etiam narium: et sciat, quod non in omni inveterato gallico hoc fit, sed tantum in illis, in quibus inunctio facta est cum hydrargyro." (Fallopii. De morbo gallico tractatus. Aphrod., p. 827.)



after the disappearance of the cutaneous affections, and then require particular modes of treatment for their cure.

934. The *gummy tumours*, (*gummata*, *atheromata*,<sup>1</sup>) situated more deeply than syphilitic subcutaneous tubercles, and very frequently developed over bones, are frequently followed by ulcers in the form of *excavations* or *holes*; they are very rarely met with accompanying a first attack of syphilitic eruption.

935. Under the title of *cachexia syphilitica*, medical writers have described a profound and serious implication of the general system, which cannot usually be satisfactorily explained from any great severity in the evident symptoms of a syphilitic taint, nor from the extent of the lesions which have preceded it, nor from the influence of any measures of cure which may have been employed in previous stages of the complaint. We do occasionally, in fact, meet with adults, and men still in the vigour of life, who, having contracted syphilis, appear to sink prematurely into old age; their skin sallow, loose, and earthy to the touch, seems more than adequate to surround their shrunken extremities. With this cachexy of adults, we must assimilate that under which those unfortunate children almost always labour, whose parents are affected with constitutional syphilis: these infants have the look of diminutive old men.

936. *Phagedenic ulcers* of the amygdalæ, velum palati, and pharynx,<sup>1</sup> are very frequently encountered at the same time as venereal eruptions. Serpiginous ulcers of the gums, of the tongue, and inner aspects of the cheeks, are much less commonly met with.

937. *Purulent syphilitic ophthalmia* is often associated with venereal eruptions among newborn infants; and ophthalmia without purulent discharge and unaccompanied with pain, but frequently followed by small ulcers, spots, and partial opacities of the transparent cornea, is often observed along with syphilitic eruptions in adults. Iritis is found to occur along with various forms of syphilide, but more frequently with the papular than any other. I have several times seen the affection supervene after the apparent cure of this eruption, and without the recurrence of any other form of syphilide.

938. Several diseases of the *nervous system*, amaurosis, deafness from paralysis of the auditory nerve, paralysis of the limbs, neuralgia, &c., and different internal inflammatory affections, as of the œsophagus, larynx, trachea, and even of the bronchi and intestinal canal, observed in individuals suffering under cutaneous eruptions and various other serious symptoms of constitutional syphilis, are phenomena which have been called in question on account of their extreme rarity, but of which the reality can be proved by incontestable facts. The venereal nature of such accidental and grave diseases is rendered still more probable by the circumstance of their yielding readily to mercury.

939. To conclude, almost the whole of the simple inflammatory affections of the skin, such as scabies, eczema, prurigo, &c., &c., may be accidentally associated with an eruption of a truly syphilitic nature: in the public prisons it is by no means uncommon to find scabies complicated with constitutional syphilis. (a)

If the diagnosis of these complex cases require much discrimination on the part of the physician, there are other complications, the treatment of which is surrounded with peculiar difficulties: such are those in which constitutional syphilis is associated with scrofula, with scorbutus, or chronic inflammation of the cœcum and colon.

940. *Diagnosis*.—I have already made known the distinguishing characters of the different varieties of syphilitic eruption, from those

(a) A good description of venereal eruptions will be found in Mr. Babington's Notes on Hunter (*on the Venereal Disease*.—Am. Ed., p. 242-4), and a yet fuller one in M. Cazenave's *Traité des Syphilides*.

<sup>1</sup> "Præterea sunt *apostemata dura*, adhærentia paniculis et ossibus ut sunt ossæ foreulæ pectoris, crurum, et frontis quæ a vulgaribus gummata appellantur... hanc eandem materiam videmus quotidie in apostematibus duris quæ vulgares gummata appellant. Nam quando inciduntur, aut ex se rumpuntur, sunt plena materiæ *albæ, viscosæ*, et aliquando cum lividitate, quandoque vero cum rubedine aliquâ secundum diversam admisionem." Massa (*Aphrodisiacus*, p. 46—43). G. Fallopius (*De gummatis gallici*.—*Aphrod.*, p. 826), distinguishes *gummata gallica* into *tophaceous* or *hard*, which appear to have been nodes and thickenings of the periosteum, and *soft*, which included three varieties; one, of the consistence of lard; another, pulaceous (*Atheroma gallicum*); and a third, soft like honey (*Meliceris gallica*).

<sup>2</sup> "A principio apparent in gutture mollificatio uvæ et apostemata, sclerotica mala quæ non maturantur nisi raro, et ulcerantur ulceratione maligna, quæ apostemata in recidivâ sæpè apparent," etc. (N. Massa. *De morbo gallico*.—*Aphrodisiacus*, p. 46).

unspecific eruptions, of like elementary forms, or which bear any resemblance to the syphilides in outward appearance, or any analogy with them in their progress. (§§ 863—914.) I have also given the proper and distinguishing symptoms and characters of primary and secondary ulcers. To complete the diagnosis, I have only farther to exhibit the characters which distinguish syphilis from some other diseases, to which it bears a certain resemblance.

941. Hunter, Abernethy, and several others, have spoken of certain eruptions having the appearance of true syphilides, and requiring to be distinguished from these, as differing from them essentially in their nature (*pseudo-syphilis*; *syphiloid diseases*, Abernethy).

I shall, by and by, examine (*vide Vocab.*), with reference to their similarity to syphilis, the affections entitled *schervivio*, *sibbens*, *rade-syge*, *yaws*, *maladie de la baie de Saint-Paul*, *morbus Bruno-gallicus*, &c., which have been considered by some pathologists as distinct diseases, and by others, and more frequently, as peculiar or still undescribed forms of syphilis. Mean time the works of Hunter and Abernethy may be consulted for information in regard to the diseases which have been entitled pseudo-syphilitic.<sup>2</sup>

<sup>2</sup> Hunter (on the venereal, pt. vii. chap. ii, on the diseases which resemble syphilis), has endeavoured to show the analogy which scorbutic spots may in some cases present to venereal eruptions, of syphilitic to rheumatic pains, and of venereal tumefaction of the bones and periosteum, to that which is sometimes occasioned by scrofula and rheumatism. Hunter asserts, moreover, that there are certain affections which resemble the venereal disease, not only in appearance, but in their mode of contagion; that they give rise immediately to analogous effects, and produce consecutive symptoms resembling those of syphilis. In support of this opinion, he quotes the case of a surgeon, who, on opening an abscess in the shoulder of a negress labouring under yaws, accidentally inoculated one of his fingers, which was slightly excoriated, with the matter, and was attacked with tumours, that were unsuccessfully combated by mercury, with nocturnal pains of the tibia and fibula, afterwards with a scabby eruption on different parts of the body, and at a still later date with a discharge of viscid mucus from the throat and nostrils.

To this case, which Hunter thinks ought to be distinguished, both from the venereal disease and the yaws, he adds two others: one is that of a man who, after being cured of a chancre, had, about six weeks after another sexual intercourse, an excoriation of the prepuce, which became very deep and painful; the woman was attacked with a swelling in the groin, which suppurated, and was cured at the end of six weeks; but during that time the skin became covered with crusted pustules, some occurring on the face and thighs, though the hands and feet were more particularly the seat of the eruption, and there the epidermis was detached in scales. The whole of these eruptions got better without mercury. The second case is that of a man of debauched habits, who had a painful ulcer on the glans penis, which was made worse by the use of mercurial preparations; a considerable tumour existed on the right side of the frontal, and on the left parietal bone, together with spots on the inner part of the left tibia; these two symptoms disappeared; but some months afterwards, the tumour of the cranium reappeared; several abscesses formed; the bones of the skull became carious, and several ulcers were the consequence.

A nurse gave the right breast to her own child, and the left to a child of a neighbour; about six weeks afterwards, several ulcers formed round the left breast, the glands of the axilla swelled, the ulcers spread, and the nipple was destroyed; cicatrization took place at the end of three months; the child had aphthæ in the mouth, and ulcers on different parts of the body. This woman subsequently suffered from pains in the bones and joints, and these were succeeded by an eruption on the arms and thighs, which terminated in ulceration; she was unable to take mercury on account of its always producing fever; she afterwards became pregnant, and was delivered of a diseased child, whose body was covered with a scabby eruption, and which lived about nine weeks. The child, for some time before its death, had been entrusted to the care of a wet nurse; before long, the nurse was attacked with pain in the head, sore throat, and an ulcer on the breast; the bones of the nose and palate also exfoliated. The mother of the child again became pregnant, and was delivered of a sickly infant, which died at the end of a month. About a year afterwards, this woman's ulcers broke out afresh, and although they were treated with mercurial dressings, and mercury was also administered internally, it was not till the end of the year that they began to cicatrize.

The first of these cases quoted by Hunter, will be particularly examined when we treat of yaws; the remainder do not appear to me to differ from ordinary cases of venereal infection, excepting as regards the inefficacy of the mercurial treatment, which, as is well known, is not applicable in all forms or at all periods of syphilitic disease. With regard to the cure of ulcers on the genital organs without mercury, we are no longer at liberty to conclude any thing from that against their venereal nature, since it is now an ascertained fact, that every form of ulcer of the genital organs is capable of being healed without the exhibition of this mineral.

M. Abernethy (*Surgical Observations*, 8vo., London, 1804: on diseases resembling syphilis). "A gentleman thought he had infected a slight cut on his hand (which was situated in front and just below the little finger) with the discharge from a bubo in the groin, which he had opened. The wound fretted out into a sore, which he showed me, about the size of a sixpence, and which I affirmed had not the thickened edge and base, and other characters of a venereal chancre. I therefore recommended him to try the effect of local means and not to use mercury. In about a month the ulcer contracted in its dimensions, and assumed a healing appearance. A considerable tumour arose over the absorbing vessels which proceed along the inner edge of the biceps muscle. The tumour was discussed, and the sore healed without mercury. Three weeks afterwards, in each tonsil, there was an ulcer deeply excavated, with irregular edges, and with a surface covered by adhering matter; ulcers in short, which every surgeon who depends on his sight as his guide, would have pronounced



Whilst the epidemic elephantiasis of the Greeks, (the leprosy of the middle ages,) was still frequently observed in Europe, and when syphilis prevailed extensively at the same time, it became of importance to point out the distinctive characteristics of these two diseases, both of which were looked upon as contagious, and both of which deeply deranged the constitution, produced spots, tubercles, and ulcers on the skin, caused the hair, eyebrows, and beard, to fall off; occasioned ulcerations in the mouth, nose, nasal cavities, and larynx.

In the present day, well-determined differences in their appearance, progress, and above all, in the mode of development of their primary symptoms, would no longer leave any uncertainty as to the diagnosis of these two diseases, even if elephantiasis had not ceased to exist among us.

Scorbutus can never be confounded with the cachectic state which is sometimes observed in constitutional syphilis, or after the abuse of mercurial preparations.<sup>1</sup>

With regard to scrofula, the glandular enlargements, the ulcers, caries and fistulæ, which it produces, and the cicatrices which these leave behind them after cure, the inflammation of the eyes, the affections of the throat, and enlargements of the tonsils, the discharge and ulcers of the nose, the swellings about the joints, and other diseases of the articulations which it occasions, have likewise peculiar appearances which, in almost all cases, prevent their being confounded with affections of a syphilitic nature exhibited in the same parts. But a degree of real uncertainty is sometimes experienced when we find a person of scrofulous habit attacked by secondary syphilis, and presenting disorders of the nose and eyes, the appearance of which is neither decidedly scrofulous nor decidedly syphilitic, and endeavour to distinguish the influence of the constitutional peculiarity from that of the venereal virus, on the development of these disorders, with a view to determine their treatment. These difficult cases, which are unfortunately of too frequent occurrence, are always very troublesome.<sup>2</sup>

942. It is a very general opinion that syphilitic eruptions, left to

to be syphilitic. Shortly after, also, some copper-coloured eruptions appeared on his face and breast, which were declared to be syphilitic by several surgeons. A circumscribed thickening and elevation of the pericranium covering the frontal bone appeared at the same time. "The young man went into the country, and the symptoms disappeared in a fortnight without the use of mercury." This last circumstance confirmed Mr. Abernethy in the opinion he had formed, that the disease was not venereal; persuaded as he felt, that a disease which got well spontaneously and without mercury, could not be syphilitic; an opinion which a multitude of well-authenticated facts contradict sufficiently now-a-days, to justify me in considering as really venereal the disease under which this young gentleman laboured.

Carmichael, in his "Essay on Venereal Diseases," chap. v., when speaking of diseases most likely to be confounded with those of venereal origin, details several cases, the venereal nature of which appears to me to be very probable, and which cannot with propriety be separated from the history of syphilis; he makes mention, however, of a case of phagedenic ulcer of the throat, which made its appearance without previous syphilitic infection either of recent or older date, according to the testimony of the patient.

<sup>1</sup> Sebastianus Aquilanus (De morbo gallico.—Aphrodisiacus, p. 5) maintains the identity of elephantiasis and the morbus gallicus. P. Maynard (De morbo gallico tractatus.—Aphrod., p. 389), and several others, are of the same opinion. Other writers have thought with reason, that syphilis was a distinct disease; among those of this opinion, I may particularly mention N. Leonicens (De epidemia, &c. Aphrod., p. 17); G. Fallopius (De morbo gallico tractatus.—Aphrod., p. 763); H. Fracastorius (De syphilide seu morbo gallico lucubratio.—Aphrod., p. 203, &c.).

<sup>2</sup> The abuse of mercurial preparations has long been held the cause of very serious injury to many individuals attacked with syphilis. This opinion has lately obtained extensive credit in England, France, and Germany; and the physiological school has contributed powerfully to its propagation. See on the ill effects of mercury, Fallopius (De morbo gallico tractatus.—Aphrod., p. 809).—Sintelaer. "The Scourge of Venus and Mercury, &c., with the true way of curing the mercurial pox, found to be more dangerous than the pox itself."—London, 1737. Ludolf. "Demonstratio, quod atrocissima luis venerea symptomata non sicut affectus morbi, sed curæ mercurialis institutæ." Erford, 1747. Consult also Hunter on the danger of giving mercury when the disease is not venereal, that is to say, when the symptoms are not such as those which he considers exclusively venereal.—(Traité des maladies Vénériennes, Paris, 1787, p. 407), and even in the diseases which he believed to be syphilitic, (idem, p. 361). For my own part, my conviction as to the specific and curative action of mercury in the treatment of venereal diseases is now stronger than ever; and I do not recollect a single case in which I have had reason to regret having employed it. This leads me to conclude, that there is much exaggeration in what has been said in regard to the ill effects of mercury, always admitting that salivation, hydrargyria, and mercurial fever are serious evils, the occurrence of which cannot always be effectually guarded against, even by administering this medicine in doses calculated with the utmost care. But these accidents rarely supervene when mercury is cautiously exhibited, and though they did happen much more frequently than they do, they are slight evils to place in opposition to a curative influence, which has never been approached in power by any other mode of treatment devised.

themselves, are not susceptible of *spontaneous* cure:<sup>3</sup> nevertheless, we do occasionally find venereal eruptions, and other secondary symptoms of syphilis disappearing of their own accord for a time; but they almost always reappear afterwards, either in the same form or under some different aspect. (a)

(a) See note in a subsequent page, in which Mr. Mayo's observations on this point are stated.

In summing up the characteristic features of syphilitic eruptions, with a view to diagnosis, we may lay down the following propositions.

The colour of syphilida depends on a morbid secretion of the corion, constituting the pigment, or, as it is now called, the chromatogenous apparatus; and, in this respect, their study might come under the head of disorders of this apparatus. Swediaur was the first to designate the hue of syphilitic eruptions by the term red copper-colour, which sometimes passes into a yellowish-blue, as we see after a bruise. M. Cazenave (*Traité des Syphilides*) says, that the colour varies from a coppery-red to a brownish-gray; and he regards it as diagnostic. It is met with in the papulæ and tubercles, and at the base of the pustules and vesicles; it constantly accompanies the squamous elevations, sometimes the squamæ themselves. It is but partially removed by pressure of the finger; and constitutes sometimes the entire disease. It is of a more lively hue at the beginning of the eruption, and becomes more and more gray as it is about to disappear. This colour will sometimes remain after the eruption itself has disappeared, and particularly so, if the latter has left behind it any cicatrix.

Another peculiarity of syphilida is the great tendency to assume a circular form. This is manifest, not only in separate patches, limited to a small surface, but it is also seen when the eruption is disseminated over a large space, in which we can still detect a circular arrangement or segments of circles. This latter trait is chiefly noticed in serpiginous syphilida. We cannot, however, claim for this circular arrangement a diagnostic value in the syphilida generally, since in some of them it is not seen, and in other cutaneous eruptions, not of a syphilitic nature, it is met with, as in simple herpes, lepra vulgaris and some varieties of lichen, &c. Besides, it is worthy of remembrance, that in syphilitic eruptions of other orders, as in the tuberculous, for example, there is a constant tendency to this circular arrangement. This feature has been noticed by authors, who describe a venereal eruption, particularly when affecting the face, by the term *corona veneris*.

Another feature in syphilitic eruptions is their chronic duration. Even when the premonitory symptoms seem to announce an acute disease, the eruption itself is slow in its progressive changes. If it be a pustular syphilide, we often see it with a large indurated base, terminating in a minute point of suppuration. If vesicular, the vesicle, though voluminous, remains unchanged, without rupture or loss of transparency, during a period of four, five, six and even eight days, surrounded by a red areola. The progress of the eruption is always slow, suppuration difficult, and cicatrization still more so—a chronicity this, which it is important to remember, in forming our diagnosis of syphilida.

As regards the secondary lesions, we find the squamæ to be thinner and drier than in simple squamous affections; and they are not so large, as they never entirely cover the eruption or pustule, around which they form a whitish band. Bielt laid considerable stress on this appearance. The squamæ are formed again very slowly; and hence we so often find the papular elevations in syphilitic psoriasis and lepra deprived of their squamæ.

The scabs are commonly thick, greenish, sometimes bluish, hard, furrowed as it were, and very adherent. It may be that they cover an ulceration, and then they are softer, larger at their base, and in a measure surrounded by a soft coppery circle which overlaps them a little; or, again, they may rest on a cicatrized point, and they are then retracted, horny at their base, which is unequal, and which, by successive separations, displays gradually a cicatrix into which it is seemingly implanted by mammillated terminations that are surmounted by a small, dry and whitish desquamation.

<sup>3</sup> Wilson.—Observations on the Natural or Spontaneous cure of Syphilis. (Transactions of the Edinburgh Medico-Chirurgical Society, vol. iii. p. 1.)



943. *Prognosis.*—In general a venereal eruption, considered in itself, is the more serious in proportion to its tendency to terminate in ulceration. There are, besides, certain kinds of ulcers, (the *serpiginous* and *phagedenic*,) which have a greater tendency than others to spread superficially, or to penetrate in depth. The prognosis is also more or less unfavourable, according to the seat of the ulcers, and the importance of the parts which are implicated, and which are liable to be disorganized or destroyed by them; it is almost superfluous to add, that syphilitic exanthemata, vesiculæ, acute papulæ, squamæ, and non-ulcerating tubercles, are not otherwise serious than as evidences of the cause which has produced and continues to maintain them.

Nevertheless, several of these superficial lesions must be considered as the more serious, on account of certain disorders which usually follow them, or habitually supervene during their existence. Thus phagedenic ulcers of the velum palati, more frequently accompany the squamous syphilide than any other form of venereal eruption; iritis is oftener associated with papulæ, &c. The prognosis may be rendered still more unfavourable by the long standing of the disease, by the effects of ineffectual modes of treatment, and by the multiplicity or serious nature of concomitant symptoms, for example, of diseases of the bones. Independently of these considerations, the coincidence of scrofula, the decay of the constitution under the influence of the syphilitic virus, or of a chronic affection of one or more of the viscera, and frequently also the mode of affection, for the disease is always more malignant if received by hereditary descent, by nursing or inoculation, than when caught by sexual intercourse, are circumstances which render the prognosis particularly unfavourable. Farther, there are many circumstances which oppose themselves to the successful treatment of the disease—such as the necessity of residing in cold and damp situations, fatigue, and even active bodily exercise, improper diet, excesses of every kind, &c., which all tend to render the prognosis more or less unfavourable.<sup>1</sup> (a)

944. *Treatment.* The treatment of the syphilitic eruptions, like

These observations suggest the further remark, that in all the syphilida, if we except the exanthematous and squamous, there is a great tendency to destruction of tissue, as we see in the indelible cicatrix, whether it be preceded by ulceration or not.

The circular form of syphilitic ulcers is a constant feature and is especially observable in those following ecthyma. As just intimated, there may be loss of parts without ulceration. These singular results obtain in the papular and tubercular syphilida, without there having been any wound or the slightest ulceration. The ulceration succeeding to a tubercle or pustule, is very minute; and if, sometimes we see a shoulder or half of the arm covered with a large cicatrix: this last will be found to be the effect of an union of several tubercles and ulcerations which have successively run into one another. This circumstance will, also, serve to explain the apparent irregularity of the rounded form of the eruptions and ulcerations.

If to these different characters of syphilida be added the little, even local excitement or reaction, the absence of heat, acute pain, and above all, of pruritus, even in forms which, generally, in the simple state, are accompanied by extreme itching, we shall have a picture of the symptoms common to syphilitic eruptions, and which, when present, constitute the main outline of their diagnosis. For farther details on this head, including a minute description of the particular symptoms of the syphilida, etc., I refer the reader to Cazenave's work, already quoted.

(a) Vesicular syphilide may sometimes become a grave disease by its obstinacy and the pains that accompany it, as well as by the irregular and deforming cicatrices left after it. These remarks apply, however, only to a rare variety, the syphilitic eczema impetiginodes.

Bullous syphilide is always of grave import, whether it shows itself under the form of the pemphigus of children newly born, a disease which M. P. Dubois has always found to be fatal, or appears under the form of rupia, an affection which commonly indicates

that of almost all chronic diseases of the skin, imperatively requires that regard should be had, not only to the form, extent, and duration of the eruption, but also to the age and constitution of the patient.

Under the title of *preparatory treatment* are included those dietetic and general measures,—change of regimen, rest in bed, and those preliminary steps, which have for their object to bring the constitution into the most favourable state for the administration of curative and specific means. In my opinion, this preparatory treatment, too often neglected, is of the utmost importance.

945. Persons of sanguine or plethoric temperament ought to be bled once or twice during the first fortnight of treatment: they ought to continue in a state of constant repose in bed, and be kept upon very low diet of a cooling kind;<sup>2</sup> and in cases complicated with fever, phagedenic ulcers of the throat, and inflammations of the conjunctiva, or of the iris, the blood-letting, both local and general, ought to be repeated at intervals less remote: in short, in this first stage, and under such circumstances as we have described, it is of advantage, even after all symptoms of febrile excitement have ceased, that the patient should remain for several days in bed, and not swerve from the regimen prescribed.

Persons of a dry and irritable temperament, and habitually subject to obstinate constipation, should undergo, for eight days or so, a preparatory course of tepid baths and gentle aperients. We should aim, on the contrary, by means of nutritious diet and the moderate use of good wine, at fortifying the lax constitution of persons of a lymphatic or scrofulous temperament; by the same means we should also endeavour

a broken-down constitution, and which leaves behind it deep, and deforming scars.

But of all syphilitic eruptions, the most alarming, under every aspect, is unquestionably the tuberculous form, which is usually an evidence both of a secondary syphilis and of deep contamination. From its habitual seat in the face and sometimes scalp, the deep and extensive destruction of parts, and the often frightful cicatrices which it causes, tuberculous syphilide, and especially the perforating and serpiginous variety, combines, in itself, all the conditions which constitute both the absolute and relative gravity in the prognosis of syphilis.

In conclusion, as M. Cazenave (*op. cit.*) has well remarked, the syphilida in themselves alone, may give rise to serious disorders, followed possibly by frightful deformities; but they cannot be said to be the cause of death. When the patient sinks under the disease, happily a rare case, it is owing to deeper seated lesions—laryngeal phthisis, or more frequently ulcerous enteritis. This result may also be owing to a cachectic habit of body, and to a union of concomitant symptoms which attack all the tissues, and which are manifested in hectic fever, diarrhœa, hemorrhages, fetid sweats and finally death.

<sup>2</sup> Already, in the time of Massa, several physicians attributed the cure of syphilis, not to medicine, or to decoction of guaiacum, but to regimen: "Multi, qui ad pauca respiciunt, auri sunt dicere, quod sanitas quæ sequitur per potionem dictam, non est ab ipsa virtute ligni, sed a tenuitate dietæ, qui etsi sine ratione et experimento, hoc dicant," &c. (Massa, *ibid.*, p. 65.)—"Si multa quantitas cibi cum dictâ decoctione admisceretur, extingueretur ejus vis, et sic, aut multum debilitetur operaretur, aut nihil. (Massa. De morbo gallico, cap. vii.—Aphrod., p. 65.) He proves the necessity of abstinence upon physiological grounds, and the case of a man who had made use of the wonted remedies without obtaining a cure, in consequence of having failed to observe any regular regimen, and neglected the use of purgative medicines; the patient having afterwards submitted to the same plan of treatment, with restricted diet and the use of aperients, the pains, swellings and ulcers were cured in the space of twenty days.

Massa, Ulrich Von Hütten, and almost all the practitioners of their times, have insisted on the necessity of observing a strict regimen, and for food have prescribed white meats, fresh eggs, &c. The diet recommended by Massa is as similar as possible to the *cura famis* of the moderns—"et ejus prandium sunt uncie quatuor panis bene fermentati non saliti et uncie tres carnis vitulinæ vel hœdinæ, sive pullorum galinarum parvorum, etc.... et sint conditæ istæ carnes sine sale, etc.... et sic facere oportet usque ad vigesimum diem et plus si virtus ægri toleraverit." (Massa. De morbo gallico.—Aphrod., p. 63.) At the same time the patients were kept quiet, and took warm decoction of guaiacum, in order to promote perspiration. The food was afterwards gradually increased in quantity. During the *cura famis* or dietetic mode of treatment practised in the hospital for venereal subjects at Stockholm, the patient is confined to his room for about six weeks, and receives no more than about four ounces of roast beef, and five ounces of the best wheat bread, daily; his beverage is a decoction of simlac china. If this regimen is found considerably to reduce the strength of the patient, which seldom happens, the quantity of food is increased. All the symptoms have generally disappeared in the space of three or four weeks; and at the end of six, the treatment is suspended for three weeks, and then resumed for three weeks more.—(Bulletin des sc. méd. de Férussac, t. xiii. p. 152.)

<sup>1</sup> Preterea gulosi, bibuli et multum coeuntes, et sine regula omnia comedentes, et male se habentes in regimine reliquarum rerum non naturalium, non sanantur nisi raro. (M. Massa. De morbo gallico.—Aphrodisiacus, p. 47.)



vour to recruit a constitution which is enfeebled by age, or which has suffered by privation. I have found that, in women attacked with chlorosis, dysmenorrhœa, and amenorrhœa, the cure of venereal eruptions was facilitated by modifying the constitution at the same time by means of chalybeate preparations and bark.

The patient ought carefully to guard against exposure to cold or damp, and should sedulously abide by the regimen proper to his state and constitution.

The duration of the preparatory treatment may be diminished or increased according as the syphilitic symptoms appear to require prompt measures for their relief, or as the absence of severity in these allows more active treatment to be deferred.

946. Of all the therapeutic means we possess of combating a general or constitutional venereal taint, there are none more certain in their effects than the *preparations of mercury*; but experience has shown that these ought not to be administered during the existence of febrile symptoms, or of any very decided signs of local irritation. Under such circumstances, they not only do not act favourably, but are often positively prejudicial; whereas the *antiphlogistic regimen*<sup>1</sup> always moderates the symptoms, and not unfrequently causes them to disappear entirely, at least for a time. It frequently happens that it is only after this preparatory treatment that mercury can be made to act beneficially.

947. For several years past, I have adopted, as the ordinary method of treating syphilitic eruptions, the use of mercurial ointment, made into pills, internally;<sup>2</sup> and every day's experience satisfies me of the superiority of this method above all others. It has the advantage over the administration of mercurial ointment by friction, of being more certain in its curative effects, and of being exempt from the filthiness and destruction of linen which the other necessarily entails. Many comparative experiments have satisfied me that the absorption of mercury, administered internally, is more certain and regular than when employed by way of inunction; the quantity actually taken into

<sup>1</sup> For the last thirty or forty years, several practitioners of great merit, among whom may be reckoned Thomson, Hennen, Ferguson, Guthrie, Rose, and others in England, and Desruelles, Devergie, &c., in France, rejecting, in a great degree, the idea of the specific action of mercury in this disease, have agreed to meet it on the general principles pursued in the treatment of inflammatory diseases. (a) Some of the disciples of the physiological school, still more strongly imbued with the doctrine of simple irritation, deny altogether the *specific character and virulent nature* of the disease itself; and treat its primary, and even its secondary symptoms, which they look upon as sympathetic, by simple antiphlogistics.

Dr. J. Thomson and Dr. Hennen. *Edin. Med. and Surg. Journ.*, vol. 14.—J. Hennen. *Principles of Military Surgery*, 3d edition, 8vo. London, 1829.—Ferguson. *Obs. on the Venereal Disease in Portugal*, &c. *Med. Chir. Trans.* 8vo. London, vol. 4.—G. J. Guthrie. *On the Treatment of the Venereal Disease without Mercury*. *Med. Chir. Trans.* vol. 8.—Rose. *Obs. on the Treatment of Syphilis*. *Med. Chir. Trans.*, vol. 8, 1832.—H. M. J. Desruelles. *Mémoires*, inserted in the *Recueil de Mémoires de Méd. Chir. et Pharm. Militaires*, 8vo., Paris, &c.—Devergie. *Clinique de la maladie syphilitique*, 4to. Paris, pl. L. F. R. S. Richond de Brus. *De la non-existence du virus vénérien*. Paris, 8vo. 1826.

<sup>2</sup> F. Fritze (*Handbuch über die venerischen Krankheiten*, Berlin, 1790, 8vo.), Terras (*Remarques et observations sur l'usage et les bons effets de l'onguent mercuriel*, administré à l'intérieur, sous la forme de pilules, pour la guérison des maladies vénériennes. *Journ. général de méd.* t. xxi. p. 33), Sédillot (*Remarques sur un savon mercuriel*. *Journ. général de méd.* t. xvi. p. 37), have dwelt on the advantages of this method of administering mercury; and the reason of its not having been more generally appreciated is probably to be ascribed to the dose having been recommended to be carried as far as twelve pills a day, a quantity which inevitably produces salivation. I have adopted the formula of Sédillot, in the preparation of the pill of mercurial ointment, viz.: mercurial ointment, one drachm; Spanish soap, two scruples; powder of althea root, a scruple; mixed well together, and made into pills of the weight of four grains each, and prescribed in doses of two or three, very rarely of four, a day, for a month or six weeks.

Plenck (Jos. Jac.) (*Methodus nova et facilis argentum vivum agris labe infectis exhibendi*, Vindob., 1776), also employed mercury internally with very great success: the pills and mercurial mixture of Plenck, the pastils of M. Lagneau, blue pills, &c., are preparations whose action is similar to that of the pills of Sédillot. Schlesinger recommends a *mercurial mixture*, analogous to the mixture of Plenck, which he used with much success for children. Finally, Chaumette (Aut) (*De morbo gallico*, chap. 7, *curatio per pilulas mercuriales*. Aphrod., p. 555), gives a formula which may be considered as the origin of all the preceding compounds.

(a) To these we may add the names of Wallace, Ballingall, Carmichael and Ricord, and in our own country Dr. Thomas Harris, who has promulgated his opinions on the subject. As regards practice, I have for a number of years treated syphilis in all its stages without mercury, except as an occasional alterative, used after the same indications as in a great number of other diseases.

the system then depending on the greater or less degree of diligence used in rubbing in the ointment, and on the aptitude or disposition of the skin to absorb the mineral, which is known to vary in every individual. Since I have depended on this method of administering mercury, and I have long employed it with a degree of success truly remarkable, I have not had, either in my private practice, or in the course of my duty at the Hospital of La Charité and its dispensary, a single bad case of salivation or mercurial inflammation of the mouth or throat. Whenever the action of the mercury showed itself upon the gums, I have always succeeded in obviating the mischief which was impending, either by diminishing the dose of mercurial ointment, or by suspending the use of this remedy for some days. To adults and persons of mature age, I have prescribed two, and sometimes three, of the pills of Sédillot,<sup>3</sup> to be taken fasting, every morning, for a month or six weeks—seldom for a longer period. If the affection is of long standing, I almost always prescribe at the same time, a pint of the *tisane de Feltz*<sup>4</sup> daily, and the tepid bath two or three times a week; and where the eruption is accompanied by pains in the superficial bones or joints, I recommend a grain or a grain and a half of the gummy extract of opium at night.

Under the influence of this treatment, it is not unusual to observe a marked change in the state of syphilitic eruptions, ulcers, tubercles, &c., by the twelfth or fifteenth day from its commencement, and sometimes even sooner; and I have not met with any case of syphilitic eruption in persons of unbroken constitution, which a month or six weeks of this treatment has not made to disappear. In those cases in which the syphilitic virus has extended its action to the osseous system in any remarkable degree, and those in which numerous ulcers had formed upon the extremities, in consequence of the softening and suppuration of subcutaneous tubercles, or in persons who exhibited other symptoms of syphilis of long standing, I have sometimes administered considerably larger doses of mercurial ointment than those mentioned, prescribing every day, for a fortnight towards the close of the treatment, from four to five of the pills of Sédillot. But the cases in which this more active mode of prescribing mercury (which is liable to be followed by salivation) is necessary, are very rare; and I never have recourse to it except when I conceive that the inconvenience of salivation will be more than compensated by the cessation of rebellious symptoms, and the more rapid progress of the disease towards a cure. Finally, I ought to add, that the mercurial ointment, thus administered, never produces any marked derangement in the functions of digestion; the patient in general experiences no other sensible effects from its use than the progressive diminution of his venereal symptoms, followed by a complete and permanent cure. In this latter respect the preparation of mercury now recommended, has incontestable advantages over the corrosive sublimate exhibited internally.

948. Although the external application of mercurial ointment,<sup>5</sup> either by friction or otherwise, is less certain in its effects on the constitution in the majority of cases, it nevertheless presents certain advantages under particular circumstances. For instance, when a syphilitic eruption is accompanied by a chronic enlargement of the testicles without pain, when buboes of the groin exist at the same time, mercurial inunction practised upon the lower extremities is always of advantage. The same mode of administering mercury by rubbing in on the forearm and arm, ought also to be recommended in those cases in which the syphilitic poison has been accidentally inoculated by punctures or excoriations of the finger, and has been followed by enlargement of the axillary glands, and cutaneous eruptions.

<sup>3</sup> Vide Formulæ at the end.

<sup>4</sup> Ibid.

<sup>5</sup> Several ointments containing mercury and litharge, originally employed by the Arabians in chronic diseases of the skin, and subsequently by Theodoric, Guy de Chauliac, Arnaldus de Villanova, &c., were afterwards used by Massa and his contemporaries, in the treatment of the venereal disease. After having been prepared by a course of baths and purgatives, the patients usually rubbed in a dose of the *Saracen ointment*, as it was called, before the fire, every evening on going to bed. In some serious cases accompanied with *cachexia*, Massa, after having tried mercurial inunction and cinnabar fumigation in the ordinary manner without effect, sometimes suspended the treatment on the twelfth day, for ten, fifteen, or twenty days, and even a longer period, during which time, wine and generous diet were ordered for the patient, who was again subjected several times in succession to this double influence of mercury, and an analeptic or nutritious regimen till the cure was accomplished. This method appears to me to be applicable to several analogous cases.



Moreover, mercurial ointment applied by way of friction, and directly as a dressing to syphilitic eruptions, to tubercles, and, above all, to the moist tubercles of the margin of the anus and genital organs, and to ulcers, exercises, independently of its specific and general action on the constitution, a topical influence which expedites the cure of the local affections.

After taking several baths for the purpose of cleansing the surface of the skin, and shaving the hair from the legs, the patient generally rubs in for the space of fifteen or twenty minutes daily, from the ankle to the knee, half a drachm of the strong mercurial ointment. The following day, the inunction is applied to the thigh of the same limb; and the day after that, the patient takes a bath and recommences rubbing in, in like manner, on the opposite extremity: the patient should wear stockings and drawers by night as well as through the day, in order to avoid staining his bed and body linen with the ointment, which leaves marks that are very difficult to be effaced. The dose of mercurial ointment may be increased to two scruples or a drachm daily, when, after the twentieth friction with the smaller quantity, the disease continues stationary, or but little modified in its appearance, and when there are at the same time no symptoms of swelling of the gums, or other phenomena indicative of a mercurial affection of the system. I may add that, in very long standing and inveterate cases of syphilis, which have resisted the more ordinary modes of treatment, I have seen the inunction of large doses of mercurial ointment, cause all symptoms to disappear, after having produced a violent attack of fever and *copious salivation*.<sup>1</sup> When recourse is had to this method of treatment by salivation, it is necessary to examine the posterior fauces very carefully, and to attend to the state of the respiration, in order to meet at once any symptom of œdematous inflammation of the glottis or base of the larynx, should this appear.

In ordinary cases, from forty to fifty frictions, administered in combination with a decoction or infusion of the sudorific woods, generally suffice, in adults, to complete the cure.

The activity of the function of absorption in children and its inactivity in aged persons, require that the dose of ointment, and number of frictions, should be materially diminished for the former, and that the time of inunction especially should be prolonged for the latter.

949. The *bichloride of mercury* (corrosive sublimate),<sup>2</sup> adminis-

<sup>1</sup> Similar cases, and the additional fact, confirmed as it is by daily observation, that mercury is in general the more efficacious in proportion as its peculiar effects are more easily excited in the system, and as the gums are more readily affected during its administration, undoubtedly gave rise to the opinion formerly universally entertained, that salivation was necessary to accomplish the cure of the venereal disease. (Système de M. Boerhaave sur les maladies vénériennes, trad. en Français par M. de la Métrie, Paris, 12mo., 1735.)

<sup>2</sup> Strongly recommended by Blancard, and Frick, and its effects better studied by Hoffman and Boerhaave, the use of corrosive sublimate internally has become general in Europe since the numerous experiments made by Locher, a pupil of Van Swieten, were made known, who, with this preparation, treated four thousand eight hundred and eighty venereal patients successfully. (Obs. Tract. circa luum venereum, etc. Vienna, 1762, 8vo.) In France, J. J. Gardanne, (Recherches pratiques sur les différentes Manières de traiter les Maladies Vénériennes, 8vo. Paris, 1770.) Cullerier, and several of his pupils, have highly eulogized this remedy, which continues to be much employed at the present day, but which was not a favourite with Astruc and Swediaur. It has been charged with producing hæmoptysis, phthisis, with causing abortion, &c. Gardanne frequently administered the sublimate conjointly or alternately with mercurial inunction, a method approved by Dehorne. (Exposition raisonnée des différentes méthodes d'administrer le mercure, etc., 8vo. Paris, 1774.) Pibrac has exaggerated the ill effects of the sublimate, but has made some useful remarks on the inconveniences attending its internal administration, and particularly on the danger of its application to ulcers, &c. (Mém. sur l'usage du sublimé corrosif. Mém. de l'Acad. de Chirurg., t. iv. p. 153, 4to.)

Dzondi has proposed to administer sublimate in somewhat large and constantly increasing doses. He makes use of the following pills:—R. Hydrargyri sublimati corros., gr. 12; Solv. in aq. distill. q. s.; add. micæ pains albi, sacchari albi a q. s. ut f. pilul. gr. j, No. 240; and observes,—1stly. The pills must only be taken every other day. 2dly. They are not to be taken oftener than once in the day, and that immediately after dinner, a little water being drunk after them. 3dly. The patient commences by taking four pills, and increases the dose by two each time, so as to take thirty on the last day of treatment, which makes a grain and a half of sublimate at a time. 4thly. The large doses may be divided into fractions of five, six, and eight pills, swallowed one after the other. 5thly. If the pills are rejected by vomiting, an equal number is given a short time afterwards with two, three, or four drops of tincture of opium. 6thly. If colicky pains of the abdomen are complained of, three, four, or five hours after the dose is swallowed, from two to six drops of tincture of opium may be administered. 7thly. The treatment is continued during three times nine days, and no ordinary circumstances must be allowed to interfere with its full enforcement in all its points if we would be certain of a radical cure, though all the symptoms should have disappeared during the first half of the course. 8thly. Should

tered in doses of a quarter, a third, and sometimes of a half a grain a day for one or two months, is also a very efficacious remedy in venereal eruptions, and other symptoms of constitutional syphilis; but it is, in my opinion, a remedy which ought not to be employed until after mercurial ointment has been already repeatedly but ineffectually administered, and the necessity is felt for having recourse to some other preparation. The sublimate occasions salivation more rarely than friction with mercurial ointment; it is easily administered, not expensive, and it causes certain symptoms, and in particular, nocturnal pains in the bones, to disappear rapidly. But it has often, and justly, been charged with deranging the stomach, and, in some cases, with determining gastro-intestinal and pulmonary inflammations.

950. In the hope of obviating at least some of the bad effects of this remedy, without depriving it of its advantages, it has been proposed to dissolve it in water, and administer it in baths, hand and foot-baths, in lavements, and in gargles, or to employ it by way of inunction in combination with grease.

I have made many trials of the sublimate bath;<sup>3</sup> and in some cases, this mode of using the preparation has appeared to me to be of real efficacy; I have, for example, found it particularly useful among children, females, and persons whose skin was delicate. But I should never recommend the sublimate bath to be ventured on where the surface of the body was covered with numerous or extensive ulcers. Gargles of a weak solution of the sublimate, have appeared to me of service in ulcerated states of the throat, accompanied with little inflammation.

I have sometimes had recourse to mercurial *foot-baths*<sup>4</sup> in cases of syphilitic ophthalmia, in conjunction with mercury administered at the same time in other modes, which were, however, as I apprehended, incapable of acting in the same precise manner as the pediluvia.

I have never put mercurial *lotions*<sup>5</sup> or *lavements*<sup>6</sup> to the test of experiment.

I have tried frictions on the soles of the feet, with Crillo's *sublimated ointment*, the efficacy of which appeared to me very inferior to that of the common mercurial ointment.

The iodides of mercury,<sup>7</sup> combined with lard, and employed with so much success in friction against tubercular eruptions, are of peculiar

any especial cause, salivation for instance, render it imperative to suspend the treatment for some days, as soon as the reason for pausing is removed, the pills must be resumed at the number at which they were left off, so as to fulfil the whole period of four weeks. 9thly. Besides the pills, decoction of sarsaparilla must be given daily, and drank at intervals, particularly in the afternoon, either hot or cold. 10thly. The patient ought to be made to perspire slightly during the whole time of treatment, even on these days when the pills are not taken; he ought not to leave his room in winter, and only at noon in summer; he should be warmly clothed, and avoid exposure to damp and currents of air, not going near the windows; in short, he should take every precaution against getting chilled or catching cold, for a week or a fortnight after the cure is completed. 11thly. The patient should confine himself to half his ordinary quantity of food if he be a moderate eater, and to the third or fourth only when he is in the habit of eating much. He should take but little fluid, and not exceed a small roll morning and evening. 12thly. He may eat or drink what he pleases, with the exception of pork, goose, duck, game, cheese, acids and milk, and must be moderate in the use of spirituous liquors. 13thly. No local means should be resorted to for the purpose of accelerating the cure, farther than preserving the parts affected from the impression of cold air, and procuring a free outlet for any matter that may be formed.

<sup>3</sup> Sublimate baths, introduced by Baumé, and extolled by Caffé, (Avantages des bains mercuriels dans le traitement des maladies cutanées et vénériennes, 4to., Paris, 1815,) and by Wedekind, (Arch. gén. de méd., t. xxiii. p. 275,) have also been recommended in inveterate venereal cases, four drachms of corrosive sublimate, and the same quantity of muriate of ammonia, previously dissolved in water, being added to an ordinary tepid bath. F. M. B. Bonnardel has made use of this remedy in syphilitic and other arthritic complaints. (Gazette Médicale, t. ii. p. 418, 1834.)

<sup>4</sup> F. Tambone asserts, that by means of *mercurial pediluvia*, he cured twelve patients labouring under inveterate syphilis (Bulletin des Sciences Médicales de Ferrussac, t. xxii. p. 407). Verducci states, that he has employed mercurial pediluvia successfully in cases of chronic ophthalmia and ulcers of the throat. (Archives gén. de Méd. t. xxvii. p. 281.)

<sup>5</sup> Mattioli was the first who substituted *fomentation* with a solution of sublimate, for mercurial inunction. (De morbo gallico. Aphrod.)

<sup>6</sup> Royer. Diss. sur une nouvelle méthode de guérir les maladies vénériennes par les lavemens, Paris, 1764. Ferrand. Obs. sur les différentes méthodes de traiter les maladies vénér. avec par les lavemens Mercuriels. Narbonne, 1770, 4to.

<sup>7</sup> M. Bielt was the first, I believe, who employed the iodurets of mercury in the treatment of syphilitic eruptions. I have also prescribed these preparations in the same circumstances for several years, at the Hospitals of Saint Antoine and La Charité. I now make use, almost exclusively, of the dento-ioduret; the usual dose, internally, is the twelfth of a grain; externally, I employ it in proportions of one-twentieth or one-twenty-fourth in the composition of ointments.



utility in subduing induration of the spermatic cord, and certain glandular enlargements, which, in their appearance and progress, seem to partake at once of a venereal and a strumous character. In such circumstances, and where venereal eruptions exist at the same time, they may generally be employed in preference to any other preparation of mercury: their activity requires that their effects should be attentively watched. I frequently employ the deuto-iodide internally, and generally in doses of one-twelfth of a grain. I have several times observed transient inflammation of the *large* intestines supervene during its administration, but this always promptly disappeared by the suspension of the remedy, the use of which I did not resume till after an interval of several days. (a)

951. There are various other preparations of mercury, which have been employed with success in the treatment of the syphilides. I have myself made trial of several of these but a very few times, and of some of them I have never studied the action at all. Thus, calomel has been recommended<sup>1</sup> in its simple form, or combined with hemlock and aconite, with dulcamara, or antimonial preparations. But calomel so often produces salivation, even when combined with gentle aperients, that after having employed it in the papular syphilide complicated with iritis, I was induced to abandon its use, and substitute for it pills of mercurial ointment, or corrosive sublimate. Calomel blown upon ulcers of the cornea, in quantities of a grain daily, has often appeared to me to be of very great utility; I have ordered it to be drawn up the nostril with less evident advantage, in cases of ozæna. Some practitioners have recommended its being taken in this manner into the nostrils when not ulcerated, with a view to obtain the effects of its absorption; others have proposed to rub the gums and inner surface of the cheeks with calomel.

952. The bromide of mercury,<sup>2</sup> the cyanide of mercury,<sup>3</sup> and Hahnemann's soluble mercury,<sup>4</sup> appear to be remedies of undoubted power, and might very properly be substituted for the preparations which I have first and most particularly recommended, should the effects of these be found to be trifling, or not at all apparent; in my own prac-

(a) The iodides of mercury were introduced into therapeutical use by Bielt, and have since then been largely employed in the treatment of secondary syphilis. Of all the preparations of mercury, of all the means lauded in the treatment of secondary syphilis and especially syphilida, there are none, says M. Cazenave, that can compare with the iodides of mercury.

The entire value of this eulogy will be better understood by collating it with what the same author says of iodide of potassium. This salt, he tells us, acts sometimes with a promptitude which can only be compared with the effects of the proto-iodide of mercury. He has employed them both of late years, and with nearly equal success. My own experience with the iodide of potassium in tuberculous syphilide and ulcerated sore throat, induces me to place the utmost reliance on its rapidly curative powers in the diseases in question. M. Cazenave tells us, that his observation confirms the remark of Bielt, that opium combined with the proto-iodide of mercury neutralizes, in a measure, the effects of the latter; and hence he forbids the union under these circumstances. See next note.

<sup>1</sup> P. Clare ("A new method of curing Lues Venerea by the introduction of Mercury through the orifices of the absorbent vessels on the inside of the mouth," 3d edition, London, 1780), was in the habit of using calomel, in doses of half a grain, or a grain rubbed upon the mucous membrane of the mouth; this application ought to be repeated several times a day, and it is necessary to avoid drinking or spitting out the saliva.

Calomel, gum guaiacum, and black sulphuret of antimony, enter into the composition of Plummer's pills, which have been, and still are much in use.

<sup>2</sup> According to Werneck, the proto-bromate of mercury acts in the manner of calomel, and the deuto-bromate has medicinal properties analogous to those of corrosive sublimate. The first dose, ought not to exceed the twenty-fifth part of a grain, but should be augmented by two-twenty-fifth's every second day. (*Journal für chir. Augenheilkunde*, t. xiv., p. 215. Extrait dans le *Bulletin des sc. méd. de Ferrussac*, t. xxiv., p. 206.)

<sup>3</sup> The cyanuret of mercury, first employed by Chaussier, has been specially studied by M. Parent (*Note sur l'emploi du cyanure de mercure dans le traitement de la syphilis*. Gazette méd. in 4to. Paris, 1832, t. iii., p. 386). The dose is, in the first instance, the sixteenth part of a grain, and is gradually increased to half a grain. (*Ibid.*, p. 810.)

<sup>4</sup> Hahnemann's soluble mercury (the ammoniacal sub-proto-nitrate of mercury), has been employed in doses of from half a grain to a grain, generally combined with opium.

tice, however, I must say, that I have never had occasion to go beyond the preparations in general use. (a)

953. Experience having shown that, in very inveterate venereal cases, considerable advantage is often derived from combining the action of mercurial preparations with those of the sudorific woods, with purgatives, as well as with the preparations of antimony and arsenic, the result of this observation has been the introduction and very general use of several kinds of tisans, of several compound reme-

(a) "In the first stage or secondary form of constitutional syphilis, that in which the mucous membranes and skin are more especially affected, mercury finds its most numerous and rational advocates; nor does scrofulous complication prevent its use by some of the most experienced of these. In English and American practice, inunction and the blue pill, or calomel and opium, are more commonly directed. In France and on the continent generally, a marked preference is given to corrosive sublimate, combined with opium or aconite. I ought, however, to except M. Ricord and a few others who recommend at this time the proto-iodide of mercury. He begins with one grain for a dose, combined with opium or extract. cicut., the latter in quantity from three to five grains, and he carries the iodide as far as six grains in the day, but does not exceed this. Where there are much restlessness and irritability, no uncommon associates of constitutional syphilis, opium, extolled almost as a specific in the early times of the venereal disease in Europe, has been of late more appreciated for its curative virtues, in addition to its purely anodyne properties. As an adjuvant to mercury and iodine, it is worthy of all notice. I shall not pretend to deny the utility of the mercurial practice in secondary syphilis, but I can speak confidently after positive experience of the success attending the use of iodine in tincture, and of the iodide of potassium, with the compound syrup and decoction of sarsaparilla in cases of venereal disease, both of the tonsils and mouth, and in tubercular ulcerations—after mercury had been prescribed by those who preceded me in vain."—*Bell & Stokes's Lectures on the Practice of Physic*, vol. ii., p. 567.

To these remarks of mine I may add, that, they who are constitutionally lymphatic and anemic, or who, from long dissipation and destitution, are thrown into a cachectic condition, will be materially benefited by tonics, both medicinal and nutritive. Of the former, the iodide of iron will do double service, both by giving tone and removing, in a degree at least, the syphilitic disorder.

In syphilitic psoriasis and lichen, and in ulcerative psoriasis, lepra, tubercle, ecthyma and rupia, the iodide of potassium is both the safest and most efficient remedy. M. Herbert Mayo (*loc. cit.*), recommends it to be administered in doses of a scruple three times a day (for ulcerative syphilida of the skin); but it is proper to begin with small doses, giving at first five or seven grains only, and gradually increasing the quantity, which may thus be raised to half a drachm, with half a grain to a grain of iodine in combination. "Sometimes it will appear prudent to continue the use of the iodide in scruple doses three times a day for two or three months at a time; when it happens, that, although fresh ulcers are continually breaking out, while the first are healing, yet on the whole the patient's strength and general condition are progressively improving under the treatment. In other cases the influence of the iodide is temporary only, and to reacquire efficiency, it must be disused for a fortnight or longer, and this frequently." Opium is beneficial: first, by calming pain and giving sleep; secondly, by preventing the iodide of potassium from disordering the system. Similarly strong testimony to the curative powers of the iodide of potassium in secondary syphilis, including tubercular and other cutaneous eruptions, is borne by MM. Cullerier, Ricord, Cazenave, and Dr. Wallace. M. Ricord sometimes begins with the use of the iodide of mercury, as already described, but rarely for a long period; and he continues the iodide of potassium in gradually increasing doses. Very commonly he makes use of the latter alone, and relies on it, even after the tubercles have become ulcerated.

Mr. Mayo advocates the propriety of letting some cases of syphilitic psoriasis wear themselves out; and he intimates that when the disease is suspended by treatment, it returns after an interval, and its duration may thus be lengthened.



dies,<sup>1</sup> of many empirical formulæ, and of different plans of treatment generally, in some instances too highly extolled, in others too much depreciated.

954. The expense and want of cleanliness inseparable from the practice of mercurial inunction, independent of the salivation which this mode of administering mercury frequently occasions, the various bad effects attributed to the prolonged use of corrosive sublimate, and the less certain action of the other mercurial preparations, and a kind of prejudice against mercury in any shape, have combined to stimulate practitioners to look around them for other anti-venereal remedies. Of these the nitric acid, the subcarbonate of ammonia, certain preparations of gold, of antimony, and of arsenic, and several articles of vegetable origin, have been proved to be the most generally useful.

955. The *nitric*<sup>2</sup> and nitro-muriatic acids have been repeatedly recommended as anti-syphilitic in their action on the economy, and I have several times seen papular syphilitic eruptions disappear completely during the use of a nitric acid sherbet; but, as outpatients do not always present themselves at the hospital when they suffer a relapse, the trials I have made of this acid are too few to enable me of my own knowledge to assert, that it is adequate to accomplish a complete and permanent cure.

956. It has also been proposed to substitute *ammonia* and *subcarbonate of ammonia*,<sup>3</sup> for mercurial preparations in the treatment of syphilis; I have had considerable opportunities of trying the effects of these medicines, and although I have known some complete cures to result from their employment, I am inclined to regard them as less efficacious than mercury.

957. The preparations of gold<sup>4</sup> were also from a very early period recommended in the treatment of the venereal disease, but had fallen into almost entire disuse, when M. Chrestien, in 1810, again directed attention to their efficacy in certain cases.

958. I have seldom combatted venereal eruptions, or other syphilitic symptoms exclusively, by means of arsenical preparations;<sup>5</sup> but

<sup>1</sup> See, in the list of formulæ: *Arts*. Tisanes de Feltz, Tisane d'Arnould; Tisane Royale, &c.; decoction de Zittman, &c.

<sup>2</sup> F. Beddoes, "Reports principally concerning the effects of nitric acid in the venereal disease," &c., in 8vo. Bristol, 1797.—Alyon, "Essai sur les propriétés médicales de l'oxygène," etc., in 8vo. Paris, an. 7.—W. Blair, "Essay on the venereal disease, and the effects of nitrous acid," &c., in 8vo. London, 1808. C. Platt, "An inquiry into the efficacy of oxygen in the cure of syphilis," in 8vo. London, 1802. Rollo, "Cases of diabetes, with the results of the trials of certain acids," &c., in 8vo. London, 1806.

<sup>3</sup> Peyrilhe, "Remède nouveau contre les maladies vénériennes, etc.; ou essai sur la vertu anti-vénérienne des alcalis volatils," in 8vo. Paris, 1774. After a preparatory course of purgatives, baths and diluents, Peyrilhe prescribed a sudorific alkaline infusion, prepared by infusing for an hour, by gentle heat in a covered vessel, half an ounce of senna leaves, and four ounces of the leaves of the melissa officinalis in two pints of water. To twelve ounces of this infusion, four ounces of sugar, and a drachm or a drachm and a half of subcarbonate of ammonia were added. This dose was divided into four portions, of which the patient took one in the morning fasting, and one in the evening, four or five hours after dinner. This treatment was continued without interruption for eight days; the patient then paused for eight or ten days; during which time he confined himself to his ordinary beverage (a weak infusion of melissa); he then took an aperient, and recommenced the alkaline infusion. The treatment was then suspended and resumed two or three times. According to Peyrilhe, eighteen days continuance of the ammoniacal beverage suffice, in the greater number of cases, and thirty in those of a more inveterate description, to complete the cure. The dose of subcarbonate requires to be increased or diminished according to its effects upon the different systems of organs.

<sup>4</sup> Lecoq, so early as 1540, makes mention of preparations of gold. Horat speaks in high commendation of his "diaphoretic gold," a mixture of calomel, chlorate of gold, and a little gold in its metallic state. On the method of administering the preparations of gold, consult J. A. Chrestien. De la méthode iatrapeutique, etc., et sur un nouveau remède dans le traitement des maladies vénériennes et lymphatiques. Paris, 1811, 8vo., 3ème édition.—1825, 4ème éd.—Chrestien. Mem. et obs. sur un nouveau remède dans le traitement des maladies vénériennes et lymphatiques (Annales de la Soc. de Méd. de Montpellier, t. xxii. p. 166; et t. xxiv. p. 382).—F. Gozzi. Sopra l'uso di alcuni remedi aurifici nelle malattie veneree, etc. Bologna, 1817.—J. G. Niel. Recherches et observations sur les effets des préparations d'or du docteur Chrestien, dans le traitement de plusieurs maladies et notamment des maladies syphilitiques. Paris, 1821, 8vo.—Lallemand. Considérations et obs. sur les effets des préparations d'or (Nouvelles Ann. Clin. de Montp. 1822).—A. Legrand. De l'or, de son emploi dans le traitement de la syphilis récente et invétérée et dans celui des dartres syphilitiques. Paris, 1828, 8vo.

<sup>5</sup> Gmelin asserts, that arsenic is used in syphilitic cases by the inhabitants of Siberia. Zugenböhler (Hufeland and Himly, Journal des Prakt. Arzneykunde, 1809, fasc. 5).—Girdlestone (Lond. Med. and Physic. Journ. Feb., 1806).—Adair (Medical Commentaries of Edinb., t. ix. p. 35).—Kupperman, (Diss. de medicamentorum ex auripigmentis preparatorum prestantissimo usu medico, presses Bruchner, 1758, 4to.), have also mentioned the efficacy of arsenical preparations in venereal diseases.—See also Edinb. Med. and Surg. Journal, vol. vi. p. 56.

one of the remedies which I most frequently employ, the *tisane de Feltz*, contains a very small yet sensible quantity of arsenious acid in its composition, and I have become satisfied that this acid is not without its share in the general efficacy of the medicine. Fowler's solution and other arsenical preparations have also been satisfactorily proved to have been useful in certain cases of inveterate syphilis, after the disease had resisted the power of mercury.

I ought, however, to add, that I invariably prescribe the pills of mercurial ointment internally, at the same time with the arseniated decoction of sarsaparilla, or tisane of Feltz. This method of treatment, by which the effects of mercury and arsenic are combined, succeeds so perfectly in almost every instance, that it is, according to my experience, more efficacious than any other.

959. Several vegetable preparations have long possessed, and still enjoy an extensive reputation for their influence in subduing venereal symptoms. In the first rank of this class of remedies must be placed, the diet drinks, entitled *sudorific*, the active principles of which are extracted from sarsaparilla, sassafras, guaiacum, and smilax china; and next to them the decoctions of daphne mezereum, lobelia syphilitica, and arctium lappa.

960. The efficacy of the *guaiacum officinale*,<sup>6</sup> has been very unnecessarily called in question of late; a decoction of this substance, in large doses, is often indisputably useful, and has the advantage of being much less costly than that of sarsaparilla.

The employment of sarsaparilla<sup>7</sup> in venereal diseases, is also of very ancient date. The best mode of preparing the decoction, is to put two ounces of the root, without being split or washed, to steep for four and twenty hours in a pint of water; this quantity is then to be reduced one half by gentle boiling. The patient, being in bed, should take the half pint of decoction lukewarm, and sweetened with syrup of sarsaparilla, in three different doses in the morning fasting.

This root is the basis of the *tisane de Feltz*, and enters into the composition of almost all the compound vegetable drinks and decoctions, which have been found really useful in the venereal disease.

The decoction of the *smilax china*<sup>8</sup> is looked upon as less efficacious in general than those of guaiacum and sarsaparilla. I have myself used it but very little.

The infusion of the wood of the *laurus sassafras*,<sup>9</sup> combined with an equal quantity of the decoction of guaiacum, or of sarsaparilla, is

<sup>6</sup> It being generally the custom in France, to employ a combination of all the sudorific woods in the preparation of anti-venereal tisans, or decoctions, and as their action is almost always associated with that of mercury, it is necessary to turn to the writings of those authors who were in the habit of employing one or other of these kinds of wood exclusively, to obtain convincing proofs of their utility.

In this respect the observations of Oviedo, in Spain, of Poll, in Germany, and of Massa, in Italy, are perfectly conclusive. Poll asserts, that nearly three thousand persons, who had been reduced to the most deplorable condition, owed their cure to guaiacum. (De cura morbi gallici per lignum guaiacum.—Aphrodisiacus, p. 241.) Massa has described with much precision and detail, in his valuable work, the preparation of the decoction of guaiacum which was prescribed in large doses, as well as the strict regimen which the patient was required to observe during the use of this remedy, to which he attributes very great efficacy—an opinion which he supports by very full and conclusive cases (De morbo gallico.—Aphrod., p. 65). Ulrich von Hutten has also treated, with much attention and ample details, the manner of administering guaiacum, and dwells strongly on the necessity of following a very strict regimen during its use. His plan is, in fact, a *cura famis* (De morbi gallici curatione per administrationem ligni guaiaci. Aphrod., p. 275). Hunter considered this wood to possess great efficacy in syphilitic cases.

<sup>7</sup> Massa (De morbo gallico, cap. x., de radice salsæperillæ, etc.—Aphrod., p. 81), has described with much care the method of using it. From his time to the present, it has been customary to make infusions or long macerations of this root, which are afterwards concentrated and given as tisans. It is in this manner that the syrups of sarsaparilla and of Cuisinier, as well as the tisane de Feltz, rob de Laffecteur, etc., are prepared.

Mr. Richard Battley (Edinb. Med. and Surg. Journal, vol. xvi., p. 473), is of opinion, that the most active principles of this root reside in the cortical part, and that these are completely extracted by cold infusion. M. Hancock, a Brazilian physician, also satisfied himself, that a protracted process of boiling was very destructive of the medicinal effects of this substance.—(Journal de Pharm., t. xvi. p. 31.)

<sup>8</sup> N. Massa (De morbo gallico, cap. xii. in quo de radice Chinæ disseritur.—Aphrod. p. 95). Andrea Vesalius (De radice Chinæ epistolæ.—Aphrod., p. 585), A. Brassavola (Tractatus de radicis Chinæ usu.—Aphrod., p. 711), have all studied the action of this root very particularly.

<sup>9</sup> Before their conquest by the Spanish arms, the natives of Florida employed sassafras against syphilis. The Spaniards transmitted the knowledge they acquired of the properties of this plant to Europe in 1555 (Voyage de Francois Coreal aux Indes Occidentales, trad. de l'Espagnol, Amsterdam, 3 vols. 12mo., 1722). But it has not been made the subject of so many experiments as guaiacum, sarsaparilla and smilax china. A. Monavius has published a treatise on this subject (De ligno fœniculato sive sassafras, 1582). Joannes Varandæus (Tractatus de elephantiasi seu lepra, de



often more readily borne by the stomach than either of these preparations singly, and in this point of view may be considered as of real utility; but sassafras is in general considered as a less efficacious medicine in venereal eruptions, than guaiacum and sarsaparilla.

961. Opium<sup>1</sup> has never appeared to me to possess any curative influence on venereal eruptions, when administered internally; but when applied externally to certain ulcers, and particularly to those with sprouting surfaces, it expedites their cure in a remarkable manner. Farther, in allaying the pains of the bones and joints which frequently accompany venereal eruptions, and in procuring sleep to patients exhausted by long and incessant suffering, opium contributes powerfully to aid the action of the general curative means employed. Indeed I rarely think of treating constitutional venereal symptoms, without administering opium at the same time. In fine, when patients have suffered from the use of mercurial medicines, and symptoms of nervous or gastro-intestinal irritation intervene, the employment of opium will be found beneficial during the whole of the interval in which the mercurial treatment is suspended.

962. The anxiety to find substitutes among our European vegetables for the exotic woods and roots, particularly sarsaparilla, the expense of which is so great as to place it beyond the reach of the poorer classes, the popular notions of the virtues of several of the more common herbs in some districts, and the adoption of these notions by practitioners, have led to numerous experiments, the results of which, however, are not thoroughly determined.

Among the vegetable substances thus examined, the following have been the subjects of most frequent experiment, viz.:—*aconitum napellus*;<sup>2</sup> *anemone pratensis*;<sup>3</sup> *astragalus exscapus*;<sup>4</sup> *arctium lappa*;<sup>5</sup> *buxus sempervirens*;<sup>6</sup> *lobelia syphilitica*;<sup>7</sup> *conium maculatum*;<sup>8</sup> *climatis recta*;<sup>9</sup> *juniperus sabina*;<sup>10</sup> *daphne mezereum*;<sup>11</sup> *gratiola officinalis*;<sup>12</sup> *carex arenaria*;<sup>13</sup> *saponaria officinalis*;<sup>14</sup> &c. But the well established sufficiency of mercurial preparations in combination with the use of the sudorific woods, in subduing every variety of venereal symptom, has left me no inducement to make trial of the above-named articles of the materia medica, always excepting hemlock, which has appeared to me to be of evident service in cases of syphilitic eruption accompanied with pain or ill-conditioned ulcers, and the mezereum bark, the very active decoction of which is of unquestionable use in the squamous syphilides, complicated with pains of the bones.

lue venerea et hepatis, Genevæ, 1640, 8vo.), remarks, with truth, that sassafras is especially serviceable in cases of syphilitic cachexia.

<sup>1</sup> Schoepff (Schreiben von der Wirkung des Mohnsafts in der Lustseuche, Erlangen, 1781, 8vo.), made known the excellent effects obtained by Nooth, by prescribing opium in syphilis; they have since been studied by Carminati, (Opuscul. Therapeut., vol. i. p. 6,) by Pasta, (Della facoltà dell' opio nelle Malattie Veneree, Bergamo, 1788,) and Rudolph, (Diss. opii in luis venereæ sanatione efficacia, Erlang., 1792.)

<sup>2</sup> Stoerk. Libell. quo demonstrantur stramonium, hyoscyanum, aconitum, etc., 8vo. Vindob., 1762.

<sup>3</sup> Stoerk. Libell. de usu pulsatillæ, etc., Vindob. 1771, 8vo.

<sup>4</sup> Girtanner, (Abhandlung über die venerischen Krankheiten, Göttingen, 8vo., 1788-93.) Quarin (Animadversiones practicae, cap. xvi. p. 186, 8vo. Brussels, 1787.) Endter, Wegerich, and Crichton, also state that they have employed the astragalus with advantage.

<sup>5</sup> Bodard. Mat. Méd. Comp., t. ii. 132.

<sup>6</sup> Amatus Lusitanus, curat. cent., ii. No. 95.

<sup>7</sup> P. Kalm. Description d'une spécifique contre le mal vénérien, viz., *Lobelia syphilitica* (Memoirs of the Academy of Stockholm, t. xii. 1750, translated from the Swedish, and inserted in Ancien. Journ. de Méd., t. xii. p. 174.)

<sup>8</sup> Stoerk (Ant.). Libellus de cicuta, Vindob., 1760.—Libellus, 2dus. Vindob. 1761.—Libellus quo continuantur experimenta. Vindob., 1765.

<sup>9</sup> Möller. Diss. de Clematide Vitalba. Erlang., 1786.

<sup>10</sup> Quarin. Animadv. Pract. cap. xvi. de morbis venereis, p. 190 (combined with antimony, formula 43).—The bark and wood of the box-tree were anciently recommended by Leo Africanus, Brassavola, and Auger Ferrerius.

<sup>11</sup> Russel has very strongly recommended the daphne mezereum against exostosis and periostosis, (Méd. obs. and inquiries, vol. iii. p. 189,) and Cullerier has found it efficacious in certain venereal eruptions.

<sup>12</sup> J. Kostrzewski, (Diss. de gratiola, Vieuna, 1775, 4to., fig.), says that the internal use of this plant cures venereal ulcers of the nose and throat, nodes of the bones, &c. Dehaen, in venereal complaints of long standing and bad character, used a mixture consisting of three grains of sublimate, six ounces of elder rob, two drachms of the extract of gratiola, and one drachm of extract of aconite. The dose was a teaspoonful two or three times a day, and the patient was made at the same time to take an infusion of althea root, and veal broth.

<sup>13</sup> Gleditsch, Murray and Reuss propose to substitute the roots of the *carex arenaria* for those of sarsaparilla, in consequence of the moderate price they bear, and even their greater efficacy.

<sup>14</sup> Ludolf. Diss. de saponaria ejusque virtutibus specificis, Erf., 1756.—Jurine (Journ. de Méd. t. lxvi. p. 478).

963. *External treatment*.—Independently of the means calculated to subdue the general venereal infection of the system, there are others which are especially applicable to divers kinds of eruptions, ulcers, concomitant symptoms, &c.; these are almost always external or topical applications, which are generally limited in their operation to effects of a merely local nature, but which, nevertheless, do occasionally extend their influence to the constitution at large.

964. *Syphilitic exanthema*, the *vesicular psyracious*, the *pustular* and the *simple papular* forms of syphilitic eruption, always disappear under the influence of general treatment, with which simple or vapour baths may be occasionally associated.

965. The *phlyzacious pustular syphilide* and *syphilitic rupia* require particular local treatment in addition to the general measures prescribed. When the pustules are very much crowded, and the skin in the intervals between them is inflamed, emollient tepid baths, soothing cataplasms, and the application of pieces of perforated linen rag spread with some mild mercurial cerate, check the progress of inflammation, and prevent the formation of larger ulcers if the principal seat of the disease be the inferior extremities, the shoulders, &c.

966. The resolution and cure of *moist* and *flattened tubercles* developed in the neighbourhood of the genital organs, or on the margin of the anus, are singularly expedited by covering them with dressings of soft linen, spread with a mild mercurial cerate.

Gentle frictions, with an unguent of the *proto-iodide* and *deuto-iodide of mercury*, or of the *iodide of sulphur* over the large non-ulcerating tubercles which sometimes occur on the scrotum, the superior and internal surface of the thighs, under the armpits, on the face, &c., almost always and very speedily succeed in discussing them. These large tubercles are also occasionally very promptly made to disappear by the aid of fumigations of cinnabar,<sup>15</sup> which have also been used in other forms of venereal affection.

The local treatment of ulcerating tubercles is very similar to that proper for syphilitic ulcers.

967. With regard to syphilitic *maculae*, whether primary, or secondary to other forms of venereal eruption, they may be quickly made to fade and gradually to disappear, by being anointed with weak mercurial ointment, or the use of a liniment of muriatic acid.

968. The *squamous* syphilitic affections are advantageously modified by fumigations of cinnabar, used alternately with vapour baths; but they almost always get well without any kind of specific local treatment, by merely cleansing the surface of the skin by the use of the tepid bath from time to time.

969. The treatment of *ulcers* of syphilitic origin is much more complicated, and requires to be modified according to their state, their standing, and the various circumstances which may have accidentally contributed to ameliorate or to subdue the inflammatory actions of which they are the seat. Emollients and bleeding are only indicated in those cases where, after walking or other exciting causes, venereal ulcers of the inferior extremities have become painful, and their bases the seat of a tumefaction, which extends in a greater or less degree beyond their circumference. In those individuals whose general constitution did not appear to have suffered, I have repeatedly practised bleeding in cases where the skin around the trochanters, and the external parts of the shoulder, was thickly beset with small round ulcers, intermixed with numbers of subcuta-

<sup>15</sup> Si unctiones non sanant, fortissimum medicamen est *suffimigium* (Massa. De morbo gallico.—Aphrodisiacus, p. 101). Massa used half an ounce of cinnabar, and two drachms of oil of turpentine, which were placed on a pan over hot coals, in a kind of tent (*tentorium*), in which the patient remained for a period short or long in proportion to his strength. Mattioli, Lobera, Fallopius, Rondeletius, etc., have also recommended fumigations of cinnabar, a subject on which Lalouette (Anc. Journ. de Méd., t. xlv. p. 195), and Werneck (Bull. des sc. Méd. de Férussac, t. xxii. p. 406), have published some interesting observations. When the fumigation is *general*, the cinnabar is placed on a porcelain or earthenware tile, exposed to the flame of a spirit lamp, and the vapour is confined under a cloak of oil-cloth which envelops the patient. Each fumigation, performed at night, in a room at 18° of Reaumur, lasts for a quarter of an hour, after which the patient is put to bed. Eighteen or twenty fumigations, of from twenty to forty grains (Werneck) suffice for a cure. I generally employ a much larger quantity of cinnabar at the hospital of La Charité; half an ounce of cinnabar is thrown upon a hot plate, and the vapour rises into the fumigating box in which the patient is enclosed. Massa projected the cinnabar on hot coals; I have employed the cinnabar successfully in this manner, in *local* fumigations directed to the nose or face; but in this case the sulphuret of mercury is in great part decomposed, and the fumigation contains mercury in a state of vapour and sulphurous acid gas.



neous tubercles, and these regions were the seat of pretty severe local pain and puffing of the cellular membrane; I have almost always found the blood let, in such circumstances, buffy. I have also on several occasions had recourse to bleeding and emollient applications in cases where similar subcutaneous tubercles, developed in groups on the calf of the leg, formed hard irregular masses under the skin, from whence knotty cords extended in different directions into the cellular substance around. When there are many small ulcers very much crowded together, on the top of the shoulder, for example, and the skin is detached to a considerable extent after the expulsion of the sloughs at their bottom, it is scarcely ever either necessary or proper to divide the kind of bridges of integument which separate the different ulcerated orifices from one another; I have often been struck by the rapidity with which these parts become reunited, and cicatrize under the influence of mercurial treatment. It is therefore sufficient in the greater number of cases to dress the ulcers with pledgets of perforated linen, spread with mercurial cerate, and to apply plenty of soft lint over all. When the eruption occurs on the lower extremities, slight compression with a roller is an after means that contributes powerfully to the recovery of the parts affected.

It is generally considered sufficient to dress the slight superficial ulcers of the flattened species of tubercles with mercurial cerate; this dressing is also mostly applicable to simple and circumscribed secondary venereal ulcers, which show no tendency to spread rapidly either in breadth or in depth. When fungous granulations arise on the surface of these sores, it is advisable to touch them lightly with nitrate of silver, or they may be sprinkled with calomel, and the cure is then usually accomplished without any other local attention. Phagedenic ulcers imperiously require that their condition should be modified by topical applications of greater energy. Frequent experience has demonstrated that the greatest advantage is often derived from touching the surface of these ulcers with a hair pencil or dossil of lint dipped in the solution of the *acid nitrate of mercury*.<sup>1</sup> In some cases it is necessary to repeat this caustic application once or oftener, if not to the whole extent of the ulcer, at least to several points of its surface. *Nitric acid*, a strong solution of nitrate of silver, and other caustics, have also been employed in similar circumstances; but they are less frequently used in the present day than the acid nitrate of mercury, with which cauterization, either deep, or superficial, may be made, and apparently with better effect than with any other species of escharotic.

When ulcers of this kind occur on the face, and erysipelas supervenes, whether in consequence of the use of escharotic remedies, or spontaneously, the inflammation, if it be not accompanied with general symptoms of a very serious nature, must be left to itself; for it has frequently been noticed that after the subsidence of the erysipelas, these ulcers advanced more rapidly towards cicatrization, and that tubercles, when any existed in the neighbourhood of the region affected, afterwards disappeared with great celerity.

The ulcers of syphilitic rupia and those that succeed the large tubercles which become perforated in their centres like boils, are generally found covered with prominent crusts, adhering more or less firmly, which it is advisable to detach by means of cataplasms and warm baths, in order that the ulcers they conceal may be properly dressed; but it is in vain attempting to obtain the cicatrization of these by the use of escharotics, unless the constitutional disease, of which they form but one of the symptoms, has been previously subdued by appropriate medication.

Serpiginous ulcers require general measures for their cure, much more than any form of topical application, however energetic. It is familiarly known, indeed, that they constantly cicatrize spontaneously at one extremity whilst they continue to make progress at the other; and in several attempts which I have made by cauterizing deeply the edges of the ulcerating extremity, and even interesting the healthy

skin, with a view to check the morbid processes, I have had the mortification to see the parts go on ulcerating beneath the eschar, and the evil continue to spread and furrow the skin till its progress was arrested by a recurrence to general constitutional treatment.

970. When *excrescences* can be conveniently attacked with cutting instruments, it is advisable, in the majority of cases, to remove them with flat curved scissors, and immediately to cauterize the small wound which results from this trifling operation with nitrate of silver. This excision ought in general only to be practised after the constitutional affection has been subdued, and when there is no longer reason to fear that the excrescences may be reproduced by the cause which gave them birth in the first instance. When these excrescences are only slightly elevated above the level of the skin, they may sometimes be made to shrink, and disappear by the use of a strong opiate lotion, a strong solution of corrosive sublimate, the application of the powder of sabine leaves, &c. It is possible to remove pediculated excrescences only with the ligature; and even in the cases to which this means is applicable, it is less certainly efficacious and more tedious than excision.

971. Syphilitic *onychia*, independently of the general and specific treatment which it above all things requires, may possibly have occasioned such an alteration in the secreting matrix of the nail, as to make some form of local treatment indispensable. In ordinary cases, it is sufficient to envelop the extremities of the diseased fingers in emollient cataplasms, and subsequently to dress them with soft lint spread with a mild mercurial cerate. When ulceration has occurred about the roots, or along the edges of the nails, and they are completely detached from their matrices which have ulcerated, become fungous, or are surmounted on various points of their surface by irregular horny productions, it occasionally becomes necessary to extirpate these horny growths, and even to excise the matrices of the nails entirely.

With regard to the fall of the nails (*alopecia ungueale*), and the other alterations they undergo from a syphilitic cause, these require nothing beyond the general constitutional anti-venereal treatment, and particular attention to local cleanliness.

972. In *venereal alopecia* or baldness, it would be in vain to attempt to provoke the secretion of the hair, by the use of stimulating or aromatic unguents until the general affection had been destroyed; this result once obtained, the secretion of the hair is re-established of itself.

973. I shall confine myself to a few remarks on the treatment of the venereal symptoms which almost always accompany the syphilitic eruptions. Several of these symptoms disappear under the influence of the general means employed against the eruption; there are nevertheless certain symptoms which require measures of treatment peculiar to themselves.

Ulcers of the mouth and throat, in their first stages, and particularly when they have been preceded by fever, are advantageously modified by bleeding, emollient applications round the neck, soothing gargles, and a bland or milk diet for some days. These ulcers, when no longer painful, or when in their chronic state, sometimes heal rapidly under the constant use of mercurial gargles, or even of occasional slight cauterizations with the acid nitrate of mercury.

The acute syphilitic inflammatory affections of the larynx, always extremely serious, for I have seen them produce orthopnea and suffocation, just as simple oedema of the glottis does, require to be vigorously and immediately combatted by general bleeding, followed by the application of leeches to the fore part, and of a blister to the nape of the neck, aided by stimulating baths or sinapisms to the feet, and an emetic of tartar of antimony administered within the first twenty-four hours of the attack. In a case of this kind, I have seen the treatment recommended dissipate symptoms of suffocation of such urgency, that a celebrated surgeon was on the point of performing tracheotomy for their relief. When, on the subsidence of the danger, the voice continues considerably altered, and there is a good deal of laryngeal wheezing, whether these symptoms have preceded the attack of suffocation, (which is most generally the case,) or have succeeded it, and there seems reason to apprehend their continuance, two small issues should be applied to the region of the larynx; this last remedy is also applicable in cases of syphilitic caries of the cartilages of the larynx.

<sup>1</sup> Godart (Diss. sur le nitrate acide de Mercure, 4to., Paris, 1824).—Swediaur (op. cit. t. ii. p. 381).—Hatin (Nouvelle Bibliothèque Méd. 1826, t. iv. p. 188). The deuto-nitrate of mercury entered, in the proportion of the nineteenth part of a grain, into the preparation of the *Sirap de Bellef*, a remedy which is not to be relied on, and which varies in its composition, according to its mode of preparation, its age, &c.

Ward's white drops, celebrated in England, are a solution of one part of the crystallized proto-nitrate of mercury and ammonia, in three parts of rose-water; dose, from two to three drops.



In *ozæna* and caries of the bones composing the nasal fossæ, great dependence should be placed on the insufflation of calomel as a topical means of arresting and curing the mischief.

Syphilitic lachrymal tumours and fistulæ ought not to be operated upon till after a complete mercurial course, by which means I have known several cases cured: moreover, without this preliminary treatment, the operation might be followed by a recurrence of the evil and other serious consequences.

974. Patients attacked with syphilitic *ophthalmia* and inflammation of the *cornea*, and of the *iris*, ought to protect their eyes from the light. Blood-letting should be performed once or oftener, and, in cases of a serious nature, blood should be taken by cupping from the mastoid or temporal regions, and a blister applied to, or a seton inserted into, the nape of the neck. The patient should take in the morning fasting, two drops of croton oil, mixed up in twelve drops of elderberry rob; in some cases perfect abstinence from every kind of solid food should be observed during two or three days, and in all others the very lowest diet ought alone to be allowed.

The inflation of calomel, and collyria containing the *vinum opii*, or extract of belladonna, are often of great service in leading syphilitic inflammatory affections both of the external and internal tissues of the eye to a happy termination.

975. Vapour baths, aromatic baths, and fumigations of cinnabar, and flying blisters, employed either alone or in combination with the internal exhibition of opium, have appeared to me the most powerful of all the therapeutic agents we possess in allaying pains of the bones and articulations. The administration of opium and sublimate in combination, is one of the best means for effecting their permanent cure.

976. With regard to *swellings of the periosteum*, recent and painful *exostoses*, and to subcutaneous gummy tumours, local blood-letting, by the repeated application of leeches, is the most prompt method of procuring relief. Blisters employed as *rubefacients* (*vesicatories volans*) are sometimes useful; but the relief procured by these means can only be rendered permanent by submitting the patient at the same time to a general mercurial course, in combination with arseniated or slightly purgative sudorific drinks.

977. After the removal of the exciting cause, syphilitic *caries* of the bones of the extremities is sometimes arrested in its progress by alkaline lotions if the affection is superficial, or by cauterizations with the concentrated mineral acids, or the application of the actual cautery, if the disease is more deeply seated.<sup>1</sup>

978. The treatment of the syphilitic cachectic state of constitution presents peculiar difficulties: this condition is frequently accompanied by chronic inflammation of the large intestines, or by a diarrhœa which demands the use of emollient hip-baths, *lavements* of poppy-heads, or small doses of opium, several times a day. Too often, also, it is complicated with chronic enlargements of the liver, which must be combated by occasional mercurial frictions of the belly and right hypochondrium.

The diet in this cachectic state ought to be nourishing, and should consist of mutton, beef, and other good meats, broiled or roasted, taken twice a day; a light decoction of sarsaparilla and guaiacum will be found to make by no means an unpalatable beverage, which may be drunk at meals, and in the morning and evening a cup of a stronger and more concentrated decoction of the same substances may be taken. Should nocturnal pains or want of sleep be complained of, a dose of opium should be administered at night.

If, after a month of this treatment, the state of the constitution appears ameliorated, should there still be any traces remaining of syphilitic eruptions or ulcers, the radical mercurial treatment may be cautiously entered upon. In fine, I have several times seen the constitution materially strengthened during convalescence, by the patient being made to take two sulphur baths weekly.

979. It still remains for me to mention some particular modes of treatment applicable to pregnant women, nurses, and new-born infants. A pregnant woman affected with syphilis should be treated so much the more particularly as her infant is exposed to feel the fatal effects of this cruel disease; I am even of opinion that a pregnant woman after being cured of primary symptoms ought to be made to

undergo mercurial treatment, upon the presumption that she is constitutionally infected, although this does not appear from any external manifestation. Pregnant women bear the pills of mercurial ointment, and the use of the *tisane de Feltz*, prepared after the formula of the Hôpital de la Charité, without any apparent derangement of their health. Mercurial fumigations to the genital organs, vapour-baths, and prolonged and repeated sublimate baths ought not to be recommended to them.

980. When a mother suckles her child, and both are affected with the venereal disease, it is sufficient to subject the mother to anti-syphilitic treatment, the curative effects of this being transmitted by the milk of the mother to the child, and rendering it unnecessary that the child should be treated directly. This well-demonstrated fact has induced several practitioners to treat children, who are weaned or suckled by artificial means, by feeding them with the milk of a goat or an ass which has been subjected to mercurial inunction.<sup>2</sup> I have never had occasion to administer mercurial ointment internally to children; I have no doubt, however, but that this might be done successfully, by reducing the dose to about an eighth part of that which is usually prescribed for an adult.

981. Finally, whatever plan of treatment may have been adopted, it is necessary to continue it<sup>3</sup> for a fortnight at least, and sometimes even for a month after the complete disappearance of the symptoms. The cicatrization of a syphilitic ulcer should only be considered complete when all induration has disappeared from beneath and around the cicatrice. The yellow or livid spots which syphilitic pustules, and sometimes syphilitic tubercles leave behind them, are not a symptom of general infection, for they disappear of themselves, in the course of time.

#### History and particular Cases.

982. Our knowledge of venereal eruptions dates from the appearance of the great epidemic of the fifteenth and sixteenth centuries; all the forms now described with so much care were then well known, and their characters briefly but clearly indicated. Massa, so remarkable for the accuracy of his descriptions and the excellence of his therapeutic principles; Sorella, so interesting for his particular cases (*consilia*); Fallopius, whose treatise presents a more complete picture of symptoms and their treatment; and Fernelius whose exposition and division of secondary symptoms are so elaborate, deserve to be consulted above all the writers of their age. Our information on the most efficacious modes of treatment dates also from this period; and the various effects of these were so much the better appreciated, as the extent, the violence and long continuance of the epidemic, afforded opportunities of repeating them on immense masses of individuals. The collection<sup>4</sup> of the principal works published on this memorable epidemic is even now one of the best sources from whence accurate and extensive knowledge of the nature and treatment of venereal diseases is to be acquired.

Forestus,<sup>5</sup> a learned observer, has gathered together a great number of particular facts relative to venereal diseases. Schenck,<sup>6</sup> in a very erudite and methodical work, the fruit of most laborious research, has also collected several rare cases which are well worth consulting;

<sup>2</sup> This plan, proposed by Levret, (*L'art des accouchemens*, etc., 8vo. Paris, 1766.) has been generally approved; *Journal de Méd.*, t. lxi. pp. 290-64, p. 1.—Swediaur, op. cit. vol. ii. p. 120.—Gardien. *Traité d'accouchemens*, etc., 8vo., vol. iv. p. 201.

<sup>3</sup> Massa relates several cases of constitutional syphilitic disease, the treatment of which had been continued for fifty days. Several cotemporary authors restricted the patient to a very low diet, during several months after the disappearance of the symptoms. These opinions still continue to influence practice. Hunter considers it necessary to continue the treatment for a fortnight in the greatest number of cases, and for three weeks or a month, when the symptoms have disappeared very rapidly. According to Swediaur, the treatment should be continued for nearly two months in ordinary cases, and for three or four months in more serious ones. M. Dupuytren advises a continuance of the treatment for as long a time afterwards as had been required to cause the symptoms to disappear.

<sup>4</sup> *Aphrodisiacus*, sive de lue venereâ, &c. Ab Aloysio Luisino edito. fol., Lugduni Batavorum 1728.—Grüner. (*Chr. Gottfr.*) *Aphrod.* sive de lue venereâ; in duas partes divisus, etc., fol. Jenæ, 1789.

<sup>5</sup> Forestus. *Observ. curat. medic.*, t. ii. lib. xxxii. de lue venereâ, p. 519, fol. Rothomagi, 1653.

<sup>6</sup> Schenck. *Observ. med. rariores*, lib. vi., de lue venereâ, fol. Lugduni, 1644.

<sup>1</sup> Boyer. *Traité des Maladies Chirurgicales*, 8vo. Paris, 1814, t. iii. p. 475.



Astruc,<sup>1</sup> too, has dedicated several of his pages to the consideration of venereal affections of the skin and of its dependencies.

Hunter,<sup>2</sup> whose works and opinions have exercised so great an influence upon the views entertained respecting syphilis, says very little on venereal eruptions, and only regards those as truly syphilitic in their nature which require the use of mercury for their cure. Swediaur,<sup>3</sup> who also has not given all the attention they deserve to eruptions of the skin, assures us that a decoction of the husks of the walnut is very effective in several of them, in which the best remedies fail, he says, if not combined with the use of the tepid or vapour bath.

A. L. Petit,<sup>4</sup> who, under the name of pustules, comprised all venereal eruptions, has divided them into *dry* and *moist*, *scaly* and *scabby*, &c. Cullerier<sup>5</sup> and his pupils<sup>6</sup> preserve these species and describe them with more care and precision. M. Alibert classes them all under the name of *syphilides*, and gives representations of several of them of great accuracy;<sup>7</sup> but it must be acknowledged that it is only since Willan's classification<sup>8</sup> has been employed in their study, that their nomenclature, their form, their appearance in different stages, and their diagnostic symptoms, have been shown with all the desirable exactness and precision.

Dr. Carmichael has more particularly studied the syphilides under one point of view, namely, that of their relation to primary symptoms. Close observation of a great number of cases and the almost unanimous testimony of the profession, do not allow me to adopt his theoretical notions, although I acknowledge the merit of his descriptions, and the value of his views in regard to the treatment of primary and secondary venereal symptoms, as well as of his remarks, with reference to the general and constitutional phenomena which accompany them.

Much time has been spent upon inquiries into the origin of syphilis, and the nature of its cause, or of the venereal *virus*. As to the different modes of treating the disease, particularly the simple mode, and that with a thousand known and unknown remedies which have been boasted of as capable of destroying it in all its forms, I refer to the works of Astruc,<sup>9</sup> and to the dictionary of Cooper,<sup>10</sup> for an account of those most worthy of notice, and shall confine myself here to the simple mention of the best works, recently published in France on this subject; namely, those of MM. Delpech,<sup>11</sup> Jourdan,<sup>12</sup> Desruelles,<sup>13</sup> and Devergie.<sup>14</sup>

CASE CXLII.—*Syphilitic, phlyzacious pustules, terminating in ulceration, inflammation of the lungs*.—A child, five and twenty months

old, was admitted to the *Hôpital des Enfants* on the 16th of March, 1825. The parents had already lost one child which had been affected with violent ophthalmia and ulcers of the face; this one, brought up by hand, had thrived well till it reached the age of nine months. At this period several ulcers appeared on the body and were cured by the use of the tepid bath, and a salve of the composition of which the parents are ignorant. In the month of February, 1825, inflamed pustules of about a line in diameter, appeared on different parts of the body of this child, and particularly on the belly, on the buttocks and genital organs, which, after becoming filled with a whitish pus, ulcerated.

On the 29th of March a great number of ulcers, with grayish bottoms, and sharply defined edges, appeared on the hypogastric region, the genital organs, the buttocks and the insides and outsides of the thighs; some of these were oblong, others circular; some, of one line in diameter, others of two, three, or even more. Several ulcers of the same kind, but isolated, and few in number, were developed on the arms, the hands and the chest; in other parts small cicatrices, around which the skin was violet-coloured and furfuraceous, were seen. From the time of entering the hospital, the child's skin was always hot, the pulse frequent, the thirst great: it expressed its sufferings by crying continually.

After eight-and-forty hours, rather profuse diarrhœa came on (bran baths, gum-water for drink). For the last three days the ulcers had been dressed with soft lint, and a perforated linen rag, spread with mercurial ointment, and had assumed a better appearance.

March 30th.—The same general state; pulse very frequent; moaning; cough; rather profuse diarrhœa. Some of the ulcers had become covered with whitish eschars. A mucous rattle was heard in the whole of the posterior parts of the two lungs. March 31st.—The breathing is short; the weakness extreme, profuse diarrhœa continues; the extremities became cold, and the child died without convulsions at five o'clock in the morning of the 1st of April. *Section cadaveris* in the morning of the 2d of April. On the posterior parts of the body, on the region of the loins and buttocks, on the genital organs, on the hypogastric region, and on the insides and upper parts of the thighs, the ulcers of which I have spoken were seen; they were uneven and sharply cut in the edges, as if with a pinking-iron; some were isolated, others had united or very nearly so; they were generally deep and implicated the whole thickness of the skin. The subcutaneous adipose tissue in the seat of the ulcers was injected; the skin in the region of the loins and buttocks was redder than that of the hypogastrium and of the insides of the thighs; on other parts of the skin, small circular cicatrices appeared, proceeding from old ulcers. On the hairy scalp in the left parietal and frontal regions, several yellow incrustations were discovered. Fibrinous concretions filled the superior longitudinal sinus; the blood in the other sinuses was either fluid or simply coagulated. The brain and its investing membranes were healthy, the cineritious and white substances of their natural consistence; there was a little serum in the lateral ventricles. The cerebellum was healthy. The larynx, the trachea and the bronchi were the same. The inter-bronchial glands of the right side were tubercular and of small size. Both lungs were of a pale white colour. The superior and inferior lobes of the right lung and the posterior part of the left lung were gorged (engorgés). The left ventricle of the heart was twice the thickness of the right one. The liver, the spleen, the mesenteric glands, the stomach and intestines, were in a healthy state; some red spots appeared on the descending colon. A thick and whitish mucus had accumulated between the glans and the prepuce.

CASE CXLIII.—*Eruptions of flat tubercles, depressed in their centres, several of which were excoriated in their circumference; syphilitic* remarks on the syphilides and their treatment inserted in the *Journal Hebdomadaire* and other French periodicals, may be consulted with advantage. (a)

(a) To these may be added the articles *Syphilides* in the *Dictionn. de Med.*, and in the *Dictionn. de Med et de Chir. Prat.*; also *Traité des Syphilides ou Maladies Vénériennes de la Peau*, &c., par P. L. Alphée Cazenave. See, likewise, the Lectures of Mr. Skey, and of Mr. Herbert Mayo, and the work of Mr. Colles already referred to.

<sup>1</sup> Astruc. De morbis venereis, 4to., 1738 (Maculæ ephelidibus similes.—Herpetes et lichenæ.—Scabies venerea.—Rimæ et fissuræ in volis manuum.—Pustulæ cutanææ.—Ulcera contumacia.—Unguium vitia et casus.—Ophiasis et alopecia.—Porri, cristæ, verrucæ, et condylomata).

<sup>2</sup> J. Hunter. On the venereal disease, 4to. London, 1771.

<sup>3</sup> Swédiaur. Traité sur les symptômes, etc., des maladies syphilitiques, ii. 8vo., 7e ed. Paris, 1817.

<sup>4</sup> J. L. Petit. Traité des maladies des os, 4to. Paris, 1705.

<sup>5</sup> Cullerier. Art pustules. Dic. des sc. Med., in 8vo., Paris.

<sup>6</sup> Lagneau. Exposé des symptômes de la maladie vénérienne, 5 ed. in 8vo. Paris, 1818. Guérin (Alex.). Diss. (Inaux.) sur les pustules vénériennes, 4to. Paris, 1813.

<sup>7</sup> Alibert. Précis théorique et pratique sur les maladies de la peau, 2d ed. Paris, 8vo., 1822, art. syphilides, folio, pl. 40, 41, 42, et 43.

<sup>8</sup> Willan. On cutaneous diseases, in 4to., London. Art. Lichen syphiliticus.—Syphilitic psoriasis and lepra. Carmichael (Richard). An Essay on Venereal Diseases, 2d ed. 8vo. London, 1825. Cazenave et Schedel. Abrégé pratique des maladies de la peau, 8vo. Paris, 1828. Art. Syphilides.

<sup>9</sup> Astruc (op. cit. p. 466. Index chronologicus auctorum qui de lue venere scriperunt).

<sup>10</sup> S. Cooper (Surgical Dictionary, 6th ed. 8vo., London, 1830. Art. Venereal Disease).

<sup>11</sup> Delpech (Considerations sur des maladies vénériennes; Chirurg. clinique de Montpellier, t. i. p. 263) has made some important practical remarks, and has studied the complication of syphilis particularly.

<sup>12</sup> A. Jourdan (Traité complet des maladies vénériennes, 8vo., 2 vol. Paris, 1826) has given in detail, and with much care, the history of syphilis and the different modes of treatment recommended in this disease.

<sup>13</sup> Desruelles (1st et 2d Mémoires sur les résultats comparatifs obtenus par les divers modes de traitement mercuriel et sans mercure insérés dans les Mémoires du Med. de Chir. et Pharm. Militaires, 8vo. Paris, t. xxv. et xxvii.), has published the results of particular experiments made on a great number of patients; these experiments have proved the promptness of the cure of primary symptoms by simple antiphlogistic treatment.

<sup>14</sup> M. N. Devergie. Clinique de la maladie syphilitique in 4to. Paris, 1826, et 1832. A work rich in cases carefully detailed, and represented with extraordinary accuracy in a magnificent atlas.

The memoirs of Messrs. Abercrombie, Ferguson, Rose, Guthrie, Hennen, Thomson, Baco, &c.; the report upon the *cura famis*, &c., in the German journals, and certain



*exanthema, rapid cure by Sedillot's pills.*—A waiter at a wine shop, of a good constitution, sanguine temperament, born of healthy parents, and twenty-five years of age, contracted for the first time, in 1830, a syphilitic disease, characterized by a chancre on the prepuce, which appeared five or six days after having had intercourse with a woman of the town. The chancre was dressed with strong mercurial ointment, and subsequently cauterized with nitrate of silver.

A general mercurial course was begun immediately; but the chancre being healed up by the fifteenth day, the patient discontinued taking the bichloride of mercury, the preparation prescribed for him. Since 1830, this man did not contract any new venereal disease; in 1834, during the month of May, a number of prominent tubercles appeared on the glans, on the prepuce and in the groins; and shortly afterwards similar tubercles made their appearance on the forehead and hairy scalp also; no treatment had been attempted when the patient entered the Hôpital de la Charité.

Prominent rounded tubercles of the size of a silver three-pence and of a coppery colour, were then visible on the corona glandis, on the prepuce, on the scrotum, on the groins, and about the verge of the anus; those of the scrotum and verge of the anus were excoriated; on one of the groins a brownish exudation had taken place between the dermis and epidermis; the epidermis was not destroyed but merely raised by the fluid exhaled over the surface of the tubercles. Tubercles of very similar character appeared on the forehead and hairy scalp; those of the forehead formed a sort of wreath which extended from one temple to the other, following exactly the line of the roots of the hair; two tubercles only were situated out of this line in the middle of the forehead. All these tubercles, of a circular form, with a coppery and prominent surface, and in general depressed in their centres, were nearly of the same size as those of the groins. A small ulcer or a slight scab of a curved form, was perceived on some of these tubercles, principally towards their circumference, sometimes occupying only the third or the half of their extent. The epidermis covering the remainder of the tubercle, could be raised and removed with the point of a needle.

The tubercles on the hairy scalp, scattered, and few in number were less prominent; they were perceptible by their coppery colour, and the circumscribed tumefaction of the dermis of the spot which they occupied. None of these tubercles occasioned either itchiness or sensations of smarting.

On the body and extremities there were several rosy red spots, which did not rise above the general level of the skin; they were some what larger than a lentil, of a round form, pretty near to each other, unaffected with desquamation, disappearing when pressed upon long by the finger, and separated by narrow spaces, where the skin preserved its natural colour. These spots, more numerous on the upper than on the lower limbs, were of a deeper colour on the latter than on the former; they were not accompanied with itchiness, and the patient, who had not remarked them, could not inform us how long they had existed. This man did not experience any pain in the bones of the extremities; the throat had never been sore; the sleep and appetite were both excellent, and he had no symptoms of a febrile nature. The patient took three of Sedillot's pills every day, with the *tisane de Feltz* as a drink. The tubercles of the glans were dressed with mercurial ointment; baths were administered from time to time, and the patient was put upon the half hospital allowance. From the eighth day the exanthematous eruption had disappeared; the scabs which covered the tubercles were loosened; and the tubercles themselves shrunk; those which were excoriated were cicatrizing, and several were covered with a new epidermis; on the fifteenth day, the tubercles no longer rose above the surface of the skin, and nothing but coppery blotches remained on the points which they had occupied; the patient was not salivated, and experienced no inconvenience from the treatment. On the 23d of July he was well, and requested his discharge; he was advised to continue the treatment for some time longer, although all symptoms of infection had now disappeared.

CASE CXLIV.—*After more than one venereal infection, clusters of prominent tubercles, and ulcers of the leg covered with scabs: cure, by Sedillot's pills, and the tisane de Feltz.* A \* \* \*, thirty years of age, of a good constitution and sanguine temperament, was affected with

gonorrhœa at the age of eighteen; the discharge ceased at the end of a month after antiphlogistic treatment. Four years ago, this man had a bubo, which suppurated, and healed without mercurial treatment; and two years since, after an impure sexual intercourse, he contracted a chancre, which spread over a considerable portion of the glans, and destroyed the frenum.

The patient was treated by means of mercurial inunction, and the chancre healed at the end of two months. Shortly after its cure, prominent tubercles made their appearance on the fore part of both legs. A \* \* \* underwent a second course of mercury, by pills containing the bichloride of mercury; the ulcerated tubercles cicatrized, became depressed, and the cure was completed, or believed to be so, after four months of this treatment. The patient then set out for South America: but shortly after his embarkation, ulcerated syphilitic tubercles appeared afresh on the left leg. He had not recourse to any kind of treatment on this occasion, but returned to Europe, and entered the Hôpital de la Charité on the 9th of June, 1834. A large spot without prominence of the corion still appeared on the right leg, covered with a wrinkled cuticle, the deep colour of which did not disappear on pressure; on this place, a year previously, a very large cluster of syphilitic tubercles and ulcers had existed. On the fore part of the left leg, in front of the tibia, over a space ten inches in length, by three in breadth, the skin was swollen, hard, violet-coloured, adhering to the tibia, thickly beset with large prominent livid tubercles, ulcerated in the centre, and covered with a brownish and shining scab, from under which exuded a quantity of purulent sanies. These tubercles were separated from each other by portions of indurated skin, the colour of which was like that of pale wine lees; the tibia did not appear to be affected, and the patient did not experience pain either in that or any other of the bones and joints; the throat had never been sore, but the different courses of mercurial treatment he had undergone had often produced salivation, and several teeth had fallen out; those that remained were foul and black; the breath was fetid; the sleep was good, and the appetite excellent. This patient was treated with Sedillot's pills and the *tisane de Feltz*, being put upon the half hospital allowance. An emollient poultice brought off all the scabs, and the tubercles were dressed with mercurial ointment. They shortly shrank, and cicatrized; the swelling and induration of the skin, and its coppery colour, decreased a little. The patient experienced no inconvenience from the treatment to which he was subjected for more than a month, after which the tubercles healed. At this period there was still, on the inside of the left leg, a livid-coloured, uneven, and indurated surface in every point where a tubercle had existed. The small cicatrices were prominent, hard, black, ecchymosed, indolent, and did not change colour on pressure by the finger; the cicatrice appeared perfectly sound, and was not painful to the touch; the patient was advised to continue the treatment for a fortnight longer.

CASE CXLV.—*Subcutaneous syphilitic tubercles on the shoulder, with perforation of the skin; exostosis of the clavicle; pills of mercurial ointment; tisane de Feltz; cure.* S \* \* \*, widow, sixty years of age, of a lymphatic temperament, and broken constitution, was not aware of having been at any time affected with the venereal disease; for several years she had suffered much from pains in her limbs, which she attributed to rheumatism. For the last year these pains were principally felt in the right shoulder, the skin of which became ulcerated, at the same time that a considerable swelling of the inner extremity of the right clavicle took place. This patient entered the Hôpital de la Charité, the 11th of May, 1834. At this time the sternal extremity of the right clavicle was about the size of a small hen's egg; it was painful upon pressure, and habitually the seat of a good deal of pain, particularly during the night; there was no swelling of any other bone; the joint of the right knee was the only one in which pain was complained of, and this caused a little difficulty in walking; the skin that covered the acromial region was red over a space about as large as the palm of the hand, and pierced with several round holes from the size of a sixpence to that of a shilling, through which exuded a yellow and thick pus. The skin was thin and detached round each of these openings to the extent of several lines, where it possessed its natural colour; three small, rounded, hard and immovable tubercles, about the size of a large pea, without apparent change in the texture of the skin, but



adhering to it, were perceptible under the dermis. These tubercles were painful upon pressure. The patient was subjected to mercurial treatment; she took each day three of Sedillot's pills, and a pint of the *tisane de Feltz*. Under the influence of this treatment, the exostosis of the clavicle diminished in size, and became less painful; the skin where it was detached and thin, was destroyed by degrees; as a consequence of this, an ulcer of considerable extent was produced, over the bottom of which cellular and vascular granulations were soon developed; as they became rather fungous in their appearance, they were touched with the acidulous nitrate of mercury. The subcutaneous tubercles became more painful; the skin which covered them grew red and inflamed; the tubercles softened; the integuments gave way, and a thick yellowish pus was discharged; at the bottom of the ulcers a yellowish adhering substance was perceived, like the core of a carbuncle or boil, which came away in shreds several days afterwards, from the middle of the small round openings formed. The loosened integument became thin, was destroyed in parts, and larger ulcers appeared, the bottoms of which presented, from time to time, instead of the granulations of a simple sore, a red surface covered with a flimsy whitish pellicle, as if the surface had been slightly touched with nitrate of silver. These ulcers were dressed with mercurial ointment, and before long cicatrized completely. The skin of the acromion then presented several small depressed cicatrices of a livid colour, and adhering to the subjacent parts; there was no longer any tubercular formation round them, and the pains of the shoulder had entirely ceased; the patient left the hospital on the 30th of June, cured. She had continued taking Sedillot's pills during the whole time she remained in the hospital, with the exception of a very few days, when this remedy was suspended on account of a considerable diarrhoea, which speedily subsided under the influence of opiates and mucilaginous drinks.

CASE CXLVI.—*Serpiginous cicatrice on the left side of the back, the consequence of a serpiginous ulcer, treated by simple dressings; serpiginous eccentric ulcer on the right side of the back, developed three months after the cure of that on the opposite side.* Josephine M., twenty-five years and a half old, a girl of the town, who entered the Hôpital Dieu on account of a serpiginous ulcer, situated on the right side of the back, stated, that a large circular cicatrice, waved in its circumference, and covering the whole of the skin of the left side of the back, was the consequence of an ulcer, which, after lasting five months, cicatrized without the use of mercury, by being merely dressed with blotting-paper spread with cerate. This cicatrice, very prominent in some parts, where it was of a coppery red colour, was depressed in others, where it was of a whitish hue. The patient added, that five years previously she had been treated at the Hôpital Saint Antoine, for an ulcer under the arm: and that two years after that, she had had the itch. This girl, sent to the hospital by order of the police, was of very equivocal character; but she persisted in affirming that she was not affected with the venereal disease; her general health appeared very good.

The right half of the back was occupied by an extensive ulcer, four or five times the size of the hand, spreading under the axilla, and covering the outer half of the right breast. This large ulcer was superficial, and seemed only to implicate the skin to a certain depth. The surface of the ulcer was red and granular; its circumference, well defined, was rounded and waved; the skin which bounded it was sharply cut, and healthy beyond the limits of the sore, which was covered with a sanious pus of so offensive a nature, that the patients in the neighbourhood were greatly annoyed; the patient had scarcely any symptom of fever and suffered no pain. On questioning this girl again as to the origin of this horrible ulcer, she informed M. Robert and myself, that she had felt very little the matter with her back eight days previously, but that being detained by the police, the part affected had not been dressed, and that during this time the disease had become rapidly worse. She added that this ulcer, like that which had eroded the skin of the opposite side of the back, had begun by small swellings like pimples or boils (*des clous*), which had soon ulcerated, and that these ulcers had united so as to form one, which then went on extending from its centre towards its circumference.

This woman was bled, and the ulcerated parts were covered with large perforated compresses, spread with cerate, over which a quantity

of soft lint was laid. The inflammation diminished rapidly, and by the third or fourth day, the centre of the ulcer was cicatrized. The cicatrice extended progressively from the centre to the circumference, while the latter continued completely stationary, so that at the end of eight or ten days, there only remained a kind of band or stripe, half an inch wide, which, by waving irregularly, showed the limits to which the disease had reached.

From the first moment, M. Dupuytren conceived this ulcer to be of a venereal nature; the patient, nevertheless, persisted in denying that she had ever had any other affection of the genital organs than a leucorrhœal discharge of a few days continuance; she refused an examination of those parts, saying, that before having been sent to the Hôpital Dieu, she had been examined by a physician, who, had he seen reason for it, would have ordered her to the hospital for venereal diseases.

A sudorific tisan and syrup, and three pills a day, each pill containing two grains of extract of guaiacum, half a grain of gummy extract of opium, and the sixth of a grain of corrosive sublimate were prescribed. Arrived at the state we have just described, the ulcer remained stationary in some points, and cicatrized in several others; it then spread in several places, though slowly, along its external edge, whilst the internal edge cicatrized. M. Dupuytren tried the effects of calomel to the ulcer, but at the end of a few days he was obliged to discontinue this application, as it occasioned a great deal of pain, and several parts of the recent cicatrice had fallen anew into a state of ulceration; baths and emollients were therefore returned to. As soon as the inflammation had subsided, the ulcerated surfaces were touched with a pencil dipped in the acidulous nitrate of mercury; three applications of the caustic were made, and seemed to have produced a good effect, when the patient absconded from the hospital.<sup>1</sup>

CASE CXLVII.—*Serpiginous and phagedenic syphilitic ulcer eroding the face for three years, cured by the tisane de Feltz, and Sedillot's pills.* A man, fifty-one years of age, with a horrible ulcer on the face, which it had eroded in different directions, entered the Hôpital de la Charité, on the 20th of Nov., 1833. This man, of a good constitution, had never had any venereal complaint but once, a gonorrhœa, nearly twenty years since, and I have no reason to doubt the truth of this statement, as he himself informed me voluntarily of the former existence of the gonorrhœa. There were no traces of cicatrices on the genital organs. Three years ago he had had eruptions and ulcers on the face, which were considered as syphilitic, and treated with the bichloride of mercury. The use of this medicine was discontinued immediately after the disappearance of the symptoms, which were not long of reappearing. A renewed anti-venereal course again put them to flight; but the patient being of an irresolute and impatient disposition, did not continue the treatment sufficiently long, and the disease reappeared for the third time. This want of success on one hand, a feeling of shame on the other, and the depression of spirits, occasioned by a disease which obliged him to quit his business, and live apart from every one, had so much affected his mind, that he resolved to enter the Hôpital de la Charité, to make a last attempt to get rid of his infirmity. He was at this time in the following state: the whole of the right side of the nose, from the root to the corresponding ala, was in great part destroyed, and was covered with a brownish scab, flattened and indented on the surface, from under the edges of which, when it was pressed upon, a purulent sanies exuded. A similar scab which also covered a deep ulcer, extended from the lower part of the one first mentioned, towards the chin, following the direction of the zygomatic arch; the cheek on the outside of this band was evidently swelled, and presented several analogous incrustations, and some ulcers which had accidentally lost their scabs.

The upper lip was swollen, and presented several fissures towards the angle of the mouth, besides an ulcer on the right side. The lower lip, swelled in like manner, and drawn to the right side by cicatrices in the form of cords, very similar to those which are often observed after burns, was turned inside out, so that the saliva flowed from the

<sup>1</sup> This woman constantly denied the syphilitic origin of the ulcer under which she laboured, although it had every one of the external characters of the serpiginous syphilitic sore. M. Devergie has given a plate of a remarkable instance of this kind of ulcer. (Pl. 106.)



mouth whilst the patient was speaking. In spite of all this mischief, the parts were but little painful, except during mastication; the patient had no fever; but he slept badly, and was in such a state of despondency as to entertain very slender hopes of recovery.

Cataplasms, for two or three days, and warm baths, in which the patient immersed his head also, detached the incrustations, and we now saw, that under these there existed deep sulcated ulcers with hard edges, and gray or yellowish-coloured bottoms, which poured out a sanious secretion in sufficient quantity to form fresh scabs in two or three days after the fall of the first. This patient was ordered to have the tisanne de Feltz and the pills of Sedillot, in doses of three a day. After the fall of the scabs, calomel was upon one occasion blown over the surface of the sores, which were subsequently cauterized very superficially with the acid nitrate of mercury. A progressive amelioration in the state of the parts affected, was very speedily perceptible. A few sulphur baths were subsequently administered with the view of strengthening the constitution, and there were but two ulcers remaining, when, on the 30th December, erysipelas made its appearance on the face, after an attack of fever. The tisanne de Feltz and the mercurial pills were replaced by lemonade; the erysipelas terminated by resolution at the end of five days; and on the eighth day, the date at which desquamation commenced, the ulcers were found completely cicatrized. The patient was discharged well on the 4th of January, 1834.

I saw this patient eight months afterwards, his health had gone on constantly improving, and the cicatrice was solid and of good appearance.

CASE CXLVIII.—*Serpiginous syphilide characterized by ulcers in the form of C's; rapid recovery under the use of the pills of Sedillot and tisanne de Feltz.*—M. \* \* \*, twenty-three years of age, was admitted the 18th of November, 1834, into the Hôpital de la Charité, where he had already been successfully treated, four years previously, for a serpiginous ulcer on the right leg.

For several months past, several ulcers resembling a good deal the form of the letter C., had formed on the outer and posterior part of the elbow-joint of the right arm; these by coalescing gave rise to a large irregular ring, which covered the skin of the lower third of the outer part of the arm, and the upper third of the outer part of the forearm. The concavities of these ulcerated arcs were turned towards the interior of the ring, with one exception, however, for there was an arc which surrounded with great exactness, the half of the olecranal region. These ulcers formed a deep furrow, irregularly circular in its shape, of a grayish or yellowish colour, covered in part with incrustations of a darkish brown, not very prominent, and strongly adherent to the parts beneath; the edges of the ulcerated arcs were sharply cut, as if the skin and cellular membrane had been deeply chiseled, or taken away with a pinking-tool shaped like the letter C. The exterior edge of these ulcerated sulci was in general broader, more raised, and more sensible than the inner edge. On the following days, we could perceive that it was always by the outer edge, and not by its extremities, that the ulcer spread; a circumstance which distinguished these from serpiginous ulcers in general. At a subsequent period, the work of cicatrization was found to commence with the inner edge, and to advance gradually towards the outer one until it was complete. The interior edge of one of the ulcers was covered with warty excrescences when the patient entered the hospital.

The skin which was circumscribed by this ulcerated ring, was of a purplish-red colour, and in various places exhibited traces of old cicatrices. The elbow-joint was swelled and painful; the limb which was kept in an habitual state of flexion, could not be completely extended, and motion of every kind was attended with pain. The incrustations having been removed by means of emollient cataplasms, the definite chiseled appearance of the ulcers struck us still more than before. In other respects, the health of the patient was pretty good, and he was immediately put upon a course of tisanne de Feltz, and three of Sedillot's pills daily. Farther, the whole of the ulcers, except one, which was touched with a solution of the acid nitrate of mercury, were dressed with mercurial cerate; the elbow-joint, enveloped in an emollient cataplasm, was fomented every morning in a decoction of marsh-mallows. Under the influence of this treatment, which occa-

sioned neither salivation nor any derangement whatever in the health of the patient, all the ulcers, with the exception of the one which had been cauterized, got well so rapidly, that the cicatrization was complete on the 4th of December. The ulcer which had been cauterized, was then dressed with mercurial ointment, and by the 11th of December, it was also skin-whole. The motions of the elbow-joint meantime, had become as free as those of the opposite extremity.

The patient having requested his discharge, shortly after the entire disappearance of the symptoms, I recommended him to continue the treatment, by taking the pills of Sedillot for some weeks longer. (a)

(a) *Case of virulent outbreak of psoriasis.* Treatment of the primary sores had not been mercurial. *Mercury required to repel this attack. Other forms of cutaneous disease and subsequent outbreaks of psoriasis in the same case, yielded to the iodide of potassium.*—[By HERBERT MAYO, in *Med. Gaz.*, 1839.]

"A middle-aged person had been exposed to infection more than eight weeks before, when he discovered a sore upon the inner prepuce, near the glans. He showed it to a surgeon, who assured him that it was not venereal, and gave him an astringent lotion to dry it up. Ten days afterwards, which had been spent in considerable exercise and traveling, the sore presented the following appearance:—It was covered with dark adherent secretion, and the adjacent part of the prepuce was swollen and red. The sore was about half an inch in diameter, circular, one half on the body of the penis, the other on the prepuce, as it appeared when the latter was drawn back. At the bottom, the sore looked as if disposed to spread, by the sloughing of the cellular texture between the integuments and penis. It was not attended with pain. An ointment containing Peruvian balsam was applied on lint to the sore, an aperient given, and decoction of sarsaparilla, with four grains of iodide of potassium, ordered to be taken twice a day. In four or five days the sore had become clean, and had begun to granulate, when I discovered accidentally, the patient having no suspicion of its existence, another smaller sore on the opposite side of the inner prepuce. It was circular, without hardness, very slightly excavated, with a definite raised edge; the surface soft, vascular, and all but granulating. The same dressing was applied to it, and, like the first, it became a healing sore, and both were going on to cicatrize (which they did in three weeks, neither leaving hardness), when, in ten days from the commencement of the use of the iodide, syphilitic psoriasis broke out on the glans penis, on the scrotum, on the pubes, abdomen, and loins. The dose of the iodide was increased, but the eruption advanced, and, appearing upon the head and face, threatened considerable temporary disfigurement. At the same time, it seemed so little controlled by the means employed, that I thought it necessary to recommend a course of mercury. The gums were affected in three or four days, and the spots upon the forehead became stationary. The course of mercury was pursued for five weeks: by that time the spots had everywhere disappeared; but those on the forehead had left broad, yellow, circular stains, which only slowly wore out during the half year following. The character of these spots had been this: at first the upper part of the forehead looked mottled at half a dozen points near the roots of the hair; then distinct circular spots, of a faint red, were seen, a quarter of an inch in diameter; they were slightly raised and convex; as they enlarged they became less elevated, and of a darker colour—a browner shade of red; and thin scales of cuticle began to separate from them. In ten days from the termination of the course of mercury, the integument at the inner part of one eyebrow and one ala of the nose, became thickened, swollen, and red, assuming such an appearance as precedes syphilitic ulceration of those parts. The iodide of potassium was then given for three weeks, first in ten grain doses, and finally half a drachm, three times a day. In four or five days from the commencement of this medicine, the redness and swelling of the integuments had begun to decline. A week had scarcely elapsed from the discontinuance of the iodide, when a new eruption appeared; spots broke out on the face and forehead, spreading with a red or elevated edge, leaving the centre paler: For this the iodide was recommenced, and, as it did not act as quickly as before, five grains of Plummer's pill were given every night in addition. On this attack receding, the throat became troublesome; the tonsils had already been swollen and excoriated, but



## AMBUSTIO.—BURN.

983. Under the general title of *burns*, are usually designated all the injuries produced by the action of caloric on our organs, and in particular on the skin.

According to the degree of their intensity, burns of the skin are characterized by the occurrence of erythematous spots, by the presence of phlyctenæ, blebs or blisters, and by the occurrence of eschars.

1.—The *erythematous burn* (*the first degree of burn*, Dupuytren), is characterized by vivid redness of the skin, which disappears under pressure. This burn is accompanied with acute scalding or smarting sensations, and some slight swelling of the parts *implicated*. These local symptoms may only continue for a few hours or be prolonged for several days; in the latter case, the epidermis is usually detached in the shape of small squamæ. When these superficial burns are limited to small districts of the skin, they do not occasion any derangement in the principal functions; when they are very extensive, they are liable to be accompanied by restlessness, loss of sleep, delirium, and are sometimes even fatal in their consequences. Burns of the description under review may be produced by exposure to the intense heat of the sun, on the hands, face, head or neck; they are sometimes also occasioned in a slow and gradual manner on the legs and thighs of the aged, who, during winter, expose these parts much to the heat of the fire; they occur, too, among women who are in the

now an angry superficial ulceration, with a yellow edge, spread over the soft palate; this gave way at once to a gargle of decoction of bark with half a grain of corrosive sublimate to the ounce. Next a papular eruption appeared upon the forehead and face, and afterwards psoriasis at several recurrences; but these have gone away each time upon a week or fortnight's course of the iodide, and since the first outbreak the attacks have been progressively milder. During the whole period, the patient's general health has been unaffected."

The following case by Mr. Mayo, exemplifies the most *virulent lepra*.—*Cure by iodide of potassium*.

"John O'Shaughnessy, in the autumn of 1828, had a primary ulcer and bubo, for which he took mercury. Before long leprous eruption and ulceration of the throat followed. He was admitted into Middlesex Hospital in January, 1830, with several large leprous spots on his limbs and body; a large ulcer on the instep, another on the shoulder. He took liq. potassæ, with sarsaparilla, and the ulcer on the instep healed. But lepra broke out universally. The patches became covered with a great thickness of papery scales, the skin beneath which felt thickened: the scales became a crust, and falling off disclosed an ulcer. There were many of these ulcers on the limbs and body; the forehead and face were covered with them. The lips, the alæ of the nose, the eyebrows, were equally involved in ulcerated blotches. The patient suffered from burning heat of the body and face, and the ulceration of the lips produced pytalism. The bones were not affected, but there was pain on moving the joints of the legs, and a small depot of serous matter formed in the right calf. Every remedy was now tried in succession, and all did temporary but very transient good, except nitric acid with bark, and mercury: these medicines made him worse. Having had him under my care a year, and the disease being unsubdued, I then ordered (Dec., 1830) at M. Magendie's suggestion, who happened to see the patient, a sixth of a grain of iodine, with ten grains of the iodide of potassium, three times a day. The good effects of the remedy were apparent after a few days: the skin became less red and heated, several of the crusts separated, and the ulcers put on a healthy appearance. In a month the patient had made a great amendment. But now the amendment ceased. The iodide was, therefore, discontinued; upon which the patient became worse. After a fortnight he resumed the medicine, with the same advantage as on first taking it. In a month the disease became again stationary. He then discontinued the iodide, to resume its use in a fortnight. By these means in five months he recovered his strength and health; but a few blotches would occasionally appear, upon which he again had recourse to the iodide. Afterwards a very severe relapse took place, of which he was cured in the Lock by the same medicines. When I last saw him he had been quite well for some years."

habit of using *chaufrettes*.<sup>1</sup> These superficial burns (*éphélides ignéales*, Alibert), present themselves in these cases under the form of spots of reddish brown, and are constantly without any feeling of heat or smarting.

M. Briquet has frequently examined the skin of women of the lower class, whose thighs presented these kinds of ephelis, and found that they were occasioned by a vascular net-work, consisting of enlarged arteries and veins, surrounded by cellular membrane filled with blood.

2. The *vesicated or bullous burn* (*the second degree of burn*, Dupuytren), is a more intense form of this affection of the skin. The blisters or bullæ which characterize it, appear almost immediately after the action of the heated substance, particularly when this happens to be a liquid. Fresh blisters of different sizes afterwards form successively in the vicinity of those first produced, and these become more voluminous in proportion as the inflammation increases and spreads around them, which it does rapidly: the skin is red and tense; the subcutaneous cellular membrane is swelled; the heat and pain are more intense than in erythematous burns. The serum contained in the vesicles and bullæ is of a pale-yellow colour, or slightly turbid; as soon as they break the epidermis shrivels, and is thrown off, when a false membrane is sometimes exposed, covering the surface of the inflamed reticular body. A new epidermis is not long of replacing that which has been destroyed, when the burn is not very extensive, and is treated by appropriate means; but when, after the fall of the epidermis, the excoriated parts inflame and ulcerate, a discharge of sanguinolent serum is established; suppuration goes on for a long time, and a cure is rarely obtained without cicatrices.

3. The *gangrenous burn* (*third and fourth degrees*, Dupuytren), is characterized by mortification of a part or of the whole of the thickness of the skin; by the destruction of the subcutaneous cellular substance, and the death of the tissues still more deeply situated. The least serious degree of this species of burn is almost always announced by the presence of superficial grayish or yellowish-coloured and insensible spots. At the moment of the accident, nothing more is sometimes observed in this degree of burn than an erythematous redness of the skin, or the formation of a few phlyctenæ; after the lapse of three or four days, however, superficial eschars make their appearance, and sores are also subsequently formed which interest the surface, or even the whole thickness of the corion, without any excessive amount of inflammation having occurred to account for this unfortunate result. Complete insensibility, hardness, and a shriveled horny appearance, joined to a yellow or grayish colour, announce the conversion of the entire thickness of the dermis into an eschar. Phlyctenæ or blebs are usually observed immediately around the eschars, and at a greater distance there is a broad band of erythematous inflammation which is the seat of severe and burning pain.

At the end of eight or nine days, seldom sooner, and very frequently later, a line of separation begins to be established between the dead and the living parts. Suppuration becomes abundant, and the discharge is mixed with shreds of sphacelated cellular membrane; the whole of the part injured has now a gangrenous and foetid odour.

When the burn is very severe and extensive, the inflammation is apt to run high, to extend to a great distance around; and by its excess, to cause the mortification of the parts it implicates.

984. Burns of trifling extent, whether they be superficial or extend more deeply, are rarely complicated by general morbid phenomena; but whenever a considerable district of the skin is implicated, burns are accompanied by ardent thirst and extreme heat of surface; the pulse becomes hard and frequent; the urine scanty and high coloured, &c. When nearly the whole surface of the body is burned, the patient invariably dies within a few days, often within a few hours after the accident;<sup>2</sup> the pulse is then small and frequent; the extremities cold; delirium and convulsions supervene; a cold sweat spreads over the trunk and face; the features shrink, &c. Patients who escape these first violent and imminently dangerous symptoms, frequently succumb,

<sup>1</sup> Earthen pans of burning charcoal which the lower order of females in France place under their petticoats during the winter.—*Tr.*

<sup>2</sup> Serrurier. Brûlure suivie de mort au bout de 12 heures. (*Rev. Médic.*, Novembre, 1830, p. 249.)



after extensive burns, under consecutive phlegmasiæ of the pulmonary and gastro-intestinal mucous membranes. (a)

Several of these patients have even been seen to sink at the moment when the injuries they had received were nearly, or even completely, cicatrized.

985. Exclusive of the injuries of the skin, which we have described, the bodies of persons who have died from the effects of severe burns, have sometimes exhibited sanguinolent and purulent effusions into the articulations of the extremities which had been the seat of the injury; occasionally congestion of the vessels of the brain, and now and then manifest traces of inflammation in the serous membranes, but much more frequently in the gastro-intestinal mucous membrane also occur.

986. *Causes.*—Solid bodies occasion burns which are so much the more severe, in proportion as these have been applied at a higher temperature, as they are more dense in their composition, and better conductors of caloric, and as their action, whether mediate or immediate, has been continued for a longer period of time. Some substances, which burn rapidly, and which melt while in a state of ignition, such as phosphorus, sulphur, the resins, &c., produce burns that are both very extensive, and that penetrate deeply in an extremely short space of time. All liquids do not burn with equal violence. Those which require a very high temperature to make them boil, and which have a great tendency to stick to the skin, such as soup, oil, pitch, tallow, &c., are the most dangerous. The burns occasioned by alcohol, æther, or by the explosion of gunpowder, &c., are often very extensive, but generally superficial, in consequence of which they are less formidable.

Lastly.—Under the title of *spontaneous burning* or *spontaneous combustion*, certain effects or changes have been spoken of, analogous to those occasioned by the agency of caloric. The mode in which these spontaneous combustions take place is very little known, even at the present day.

987. *Diagnosis.*—The erythematous spots, blisters and eschars produced by burns, differ in the cause which produces them, from the spots of erythemæ, the bullæ of pemphigus, and the eschars of the skin observed in other diseases.

In some circumstances, nevertheless, the diagnosis may continue uncertain for a time; such was the case with a rheumatic patient, for whom I had prescribed vapour baths in the Hôpital de la Charité, and who presented an eruption in the form of a collar round the neck, consisting of oval spots, from an inch to an inch and a half in diameter, the surface of which was covered with irregular bullæ, which were succeeded, at the end of some days, by superficial eschars of a yellowish-white colour. This man being questioned several times as to the cause of this eruption, continued to assure us that he was completely ignorant of it; and we only learned, some days afterwards, on seeing the eschars, and pressing him anew with questions, that whilst seated in the vapour bath he had experienced a considerable degree of heat about the neck, but no sensation of burning. This last circumstance, strengthened by the appearance and progress of the inflammation, determined us at length as to its cause and nature; although, I repeat, the patient had not experienced the sensation of burning.

Burns ought also to be distinguished from those red patches, vesications and eschars which are produced by the application of the liquor ammoniæ, more or less diluted, to the skin.

Finally, the redness produced by sinapisms, the bullæ or vesications, caused by blisters, the grayish and black eschars engendered by the application of caustics of different kinds, and the concentrated sulphuric acid, those of a yellow colour which result from the action of nitric acid, and those of a blue cast, which are sometimes observed upon the hands of washerwomen who burn themselves with composition blue, have each appearances peculiar to themselves, and are distinguished by these as well as separated by their causes from ordinary burns.

988. The *prognosis* in cases of burns, is unfavourable in propor-

(a) Of the latter, the duodenum is more especially the seat of lesion. Mr. Curling (*Med. Chir. Transact.*, vol. vii., and *Bull. Med. Science*, 1843), gives ten cases of this complication with burns. The change was of an ulcerative character.

tion to the extent and depth of the injury. Burns are most dangerous in children, the aged, and persons of very irritable constitution. Those of the parietes of the abdomen and thorax, and of the face, are more dangerous than those of the limbs and extremities; nevertheless, burns of the hands and feet have been occasionally known to be followed by tetanus.

In burns the extent of injury which the skin has sustained, and the amount of alteration undergone by the subjacent tissues, cannot be precisely ascertained until the inflammation has reached its height, and the eschars begin to separate: even then the extent of injury done to the skin itself is ascertained with much more certainty than that which the subcutaneous cellular membrane has suffered.

989. *Treatment.*—Erythematous burns ought to be treated from the moment of the accident, by the application of cold or iced water, and by compression. Immediately after the accident, the injured part should, if possible, be plunged into cold or iced water, and then covered with compresses dipped in it and kept continually moistened, over which a roller is to be pretty firmly applied.

In cases of very extensive superficial burns, the action of the cold water may be confined to those points where the scalding heat is most severely felt, whilst the other parts are dressed with a mixture of two parts of white of egg and one of oil. When the pain is very intense, a little of the extract of hyoscyamus (*baume tranquille*) may be added to the mixture.

990. In burns accompanied with vesications, when the clothes still adhere to the injured parts, they must be slit open and carefully removed, in order not to tear the epidermis, raised by the effusion of serum beneath it.

The part should be plunged into cold water in order to appease the scalding and smarting sensations, and if it cannot be kept conveniently immersed for any length of time, after being covered with a poultice of grated raw potatoes, it should be bound up with a bandage dipped in iced infusion of althea-root. The pain and inflammation should be allowed to subside in some degree before the vesications are opened; one or more small punctures may then be made at their extremities, but the epidermis is by no means to be removed, as by its presence it protects the tender surface of the skin from the action of the air. If the surface of the corion some days after the serum has been evacuated begins to pour out a purulent secretion, which escapes with difficulty, the epidermis must be removed. Should the suppuration prove very copious, dressings spread with saturnine or Turner's cerate may be applied to the excoriated skin, and a quantity of lint or tow laid over all to absorb the pus. When the ulcerated surfaces are very extensive, saturnine topical applications must be employed with circumspection, to avoid the danger incidental to the absorption of lead into the system.

Carded cotton has been employed successfully in the treatment of burns, quantities being applied layer after layer till a stratum is formed sufficiently thick to render the injured parts insensible to pressure from without. This dressing ought not to be repeated until there is a very considerable discharge with or without the formation and detachment of eschars. The silky tufts of the *typha*, employed in the same manner, have also produced the best effects.

It is in this description of burn that Fernellius recommended the part affected to be exposed to the heat of the fire, *ignis, ipse hic ipsius alexiterium*, and that others have advised the part to be immersed in water as hot as it can be borne.

Sydenham, in the same circumstances, recommended the application of spirits of wine, or of painter's varnish.

Precisely similar measures are required in the local treatment of gangrenous burns, during their earlier stages; such measures become necessary subsequently as tend to bring about the separation of the eschars.

When the toes and fingers have been burnt to such a degree as to occasion disorganization throughout their whole thickness, it is often necessary to divide certain ligamentous connections or shreds of tendons which continue to unite them to the parts whose vitality has not been destroyed.

When a portion of a limb has been disorganized, amputation must be deferred till the symptoms, immediately consequent on the injury, have been subdued. The operation rarely succeeds when extensive



surfaces besides have suffered. Amputation may also become necessary when after, and in consequence of, the separation of the eschars, the interior of a large articulation is exposed, or when the ulcers which result are so extensive and irregular that a cure is not to be expected.

The cicatrization of wounds consequent on burns, does not always proceed regularly from the circumference towards the centre; this process sometimes commences far from the edges in several separate points at once. In every case it is of the greatest consequence to see that the cicatrice be kept of the same or as nearly as may be of the same extent as the skin destroyed, in order that, after the cure is complete, the parts may preserve their natural direction, and the freedom of their motions unimpaired. Tents of different kinds, canulæ, &c., will serve to prevent the contraction of the natural openings, as of the ears, nostrils, &c.; and contiguous parts are kept separate by compresses and dressings appropriately applied. When the fingers are burnt they should be fixed on a splint in the form of the hand, and kept easily separated from one another: splints of the requisite form, and secured with proper bandages, will prevent any undue and unnatural contraction of the extremities, the faulty inclination of the head, the dragging of the lower jaw towards the breast, &c. In order to obtain a smooth and uniform cicatrice, the granulations when too luxuriant must be touched with lunar caustic; but in spite of every precaution that can be taken, the cicatrice will always appear depressed, and will always adhere to the subjacent parts when the burn has been deep.

In burns accompanied with vesications, and sphacelus, when the discharge becomes very profuse, it is advisable to dress the wounds at least twice and sometimes even three times in the course of the day, care being taken only to expose the different inflamed regions in succession; the many-tailed bandage, therefore, is generally to be preferred to the circular roller.

991. The plan adopted by M. Lisfranc, in the treatment of burns, is peculiar: after having opened the phlyctenæ, or blisters, he removes the epidermis from their surface, and then covers the inflamed parts with a soft pledget of perforated linen rag, spread with cerate, over which he applies a compress of lint, dipped in a solution of chloride of lime; and directs the dressings to be sprinkled at intervals with this liquid, so as to be kept constantly wet with it. The solution of the chloride of lime, employed by M. Lisfranc, in general indicates three degrees of M. Gay Lussac's chlorometer. If this application fails to occasion some slight degree of pain at the moment of its use, or if in subsequent stages, the cicatrization advances slowly, M. Lisfranc increases the activity of the solution, by raising it two or even three degrees in strength. If, on the other hand, the contact of the chloride of lime produces severe pain which continues unabated for some time after the dressing has been applied, and if white albuminous deposits occur upon the surface of the inflamed skin, a solution of inferior strength must be used. The action of this application, we are assured, has always appeared to be extremely beneficial.

992. The general symptoms that immediately follow a severe burn, particularly the shock received by the nervous system, and the irregular and prolonged shivering fits with which patients are often seized, as also those inflammatory attacks of the digestive organs, which so frequently supervene, are successfully combated by the exhibition of opium. Burns which are merely superficial, and of small extent, are seldom accompanied by such symptoms, and do not generally require any change of regimen or any peculiar system of internal treatment. In extensive burns, however, rigorous abstinence must be enforced, and soothing beverages, anodyne emulsions, &c., prescribed; general bleeding, and the application of leeches to the head or epigastric region, according as the inflammation of the skin appears to have reacted on the brain or the stomach, are further very constantly indicated in these cases. Very full diet under any circumstances is improper, and will be found to delay the healing of the wounds.

993. When the trunk is the seat of a burn of considerable extent, the slightest motion is extremely painful. It is advisable in such cases to place the patient on a bed which admits of the linen and bedding being changed, and a proper vessel for receiving urine and fecal matter being got under him, without any exertion on his part, or his feeling himself obliged to move in the slightest degree.

Burns with gunpowder are almost always followed by indelible black or bluish stains. Turner mentions a case in which he was so fortunate as to prevent this stain from occurring by scraping the surface of the burn, and afterwards applying a blister and red precipitate to the blackened skin.

994. The indurated bands or cords, formed by the cicatrices of burns, when of no great thickness, may sometimes be so much relaxed that they can gradually be stretched and finally made to disappear almost entirely, by means of oily embrocations, mucilaginous or oleaginous fomentations, &c., or by the repeated use of the douche, and the enforcement of gentle motions; but when these cords are very rigid and of considerable thickness, they must be divided to their base, provided they contain no tendons, and the edges of the wound maintained forcibly apart, until complete cicatrization has taken place. (a)

(a) A great number and variety of applications have been used and are recommended for burns. The author, in the text, says nothing of the stimulating practice, as far, at least, as regards dressing. M. Müller (*Principles of Surgery*), concludes an admirable chapter on "Burns and Scalds," with the following judicious remarks:—"Some strenuously advise stimulating applications from the beginning; and a theory has been made to suit the practice. Neither seem to merit approval. Alcoholic applications may sometimes prove serviceable, in a scalded but unbroken skin, by the cold which the evaporation produces; and, in the severe injuries, any stimulant, at first increasing the pain, may afterwards be said to deaden it by accelerating and aggravating the inflammatory action, so as speedily to overcome the impaired vitality, and convert all into one slough. But such is not wise and prudent surgery. Let stimulants both internally and externally, be retained in their proper time and place; and these will be found in the second, sixth, and ninth indications of cure." The references here are; 1. To the case in which a burn or scald involves a large part of the surface, and in which the continuous use of cold cannot with propriety be had recourse to; a warm solution of opium or other anodyne is preferable; and if the duration and degree of slough be excessive, heat must be applied to the external surface generally, and warm drinks used internally. 2. After granulation is established water-dressing is applied, not hot, but tepid, as a mere detergent and protective; but when the sore manifests deficient action, then may we have recourse to various stimulating dressings. 3. To maintain the powers of the system is an important indication after the suppurative process is begun and the constitution is irritable and enfeebled. "This is done by attention to air, exercise and clothing; by generous diet; and by the use of tonics and stimuli—of the latter, the cantharides is often the most efficient form."

In the first or erythematic stage of a burn, or even in the second or vesicating, after the application of cold until the pain is subdued or removed, well carded cotton or cotton-wadding, is to be applied over the part, so as to exclude the air and to prevent any friction by clothes, &c. The same purpose will be answered by a layer of some bland adherent substance, such as will not irritate the raw or injured surface, and yet will effectually exclude the air, as soap, gum or varnish. The gum is preferable, as in the case of contused wounds. Or, the part may be dusted with flour; but when vesication is expected, this is an objectionable form of protection, inasmuch as the serum bakes it into crusts, which crack, loosen, and are apt to irritate injuriously. A popular dressing is, equal parts of lime-water and lamp-oil, or, as less unpleasant, if not quite so bland, olive-oil. The cerate of the acetate of lead and ointment of the carbonate are soothing applications. Warm vinegar has been found serviceable.

In severe burns, where there is loss of skin, and ulceration is begun, ointment of chloride of lime or lint moistened with the fluid chloride of soda, is one of the best, if not the best application, to produce healthy granulations and to prevent deforming contractions. It is in this stage that other stimulants, such as the salts of zinc, copper, silver, &c., are occasionally serviceable. Tincture of iodine and the compound solution have been recommended in some instances.

Throughout the whole period great attention must be paid to the state of the constitution and particularly to the lungs and gastro-duodenal surface. Blood-letting, antimony, calomel, and opium, will, in



*Historical Notices and particular Cases.*

995. Fabricius Hildanus<sup>1</sup> has given a good description of burns, of which he distinguishes three kinds. Turner<sup>2</sup> has left a useful chapter on burns, and has reported two cases of cure which deserve to be consulted; he made great use of the cerate which still bears his name. Parkinson<sup>3</sup> has recommended the application of spirits of wine, already prescribed by Sydenham. Sir James Earle<sup>4</sup> has shown the advantages of cold applications, early advised by Rhazes and Avicenna. For the last twenty years M. Dupuytren<sup>5</sup> has annually delivered several clinical lectures of the highest interest on this subject. Anderson's<sup>6</sup> paper may be consulted on the employment of carded cotton dressings, and that of M. Vignal on the treatment of burns by the application of the down of the typha;<sup>7</sup> Dr. Christison's observations on the distinction between burns that have happened during life and those that have taken place after death<sup>8</sup> are deserving of particular attention in several points of view. For information on the means of remedying the deformity so often induced by the contraction of the cicatrices of burns,<sup>9</sup> the work of Dr. John Thomson,<sup>10</sup> remarkable for the justness of its practical precepts and its scientific character, the later paper of Mr. James,<sup>11</sup> and the two lectures of Mr. H. Earle<sup>12</sup> may be particularly referred to. The surgical lectures of Abernethy also deserve to be consulted on this point.<sup>13</sup>

Several cases of burns of the skin detailed by Moulinié,<sup>14</sup> Lisfranc,<sup>15</sup> Bretonneau, Velpeau,<sup>16</sup> Borot de Belloy,<sup>17</sup> &c., will be read with advantage; they illustrate the several peculiarities presented by these accidents, at the same time that they present the reader with instances of the practical application of the different methods of treatment I have mentioned. The very interesting observations of Mr. Marshall on scalds or burns of the pharynx and larynx;<sup>18</sup> those of M. Lair<sup>19</sup> on the combustion of the human body; and some singular facts, open, however, to suspicion, on the subject of spontaneous combustion,<sup>20</sup> ought equally to be consulted.

succession, be required in some cases in which inflammatory excitement runs high. After this period has passed, tonics and nutritive stimulants will be proper. For the means by which extreme deformities from burns are removed and new parts substituted for the excised contractions, the reader is referred to works on Surgery, and particularly to Velpeau's Operative Surgery, Townsend's Translation.

<sup>1</sup> Fabricius Hildanus. De ambustionibus, quæ oleo et aquâ fervidâ, ferro candente, pulvere tormentario, fulmine et quavis aliâ materiâ ignitâ fiunt. Basil, 1607, 8vo. et in Op. om.

<sup>2</sup> Turner. A Treatise of Diseases incident to the skin, p. 369, 8vo. Lond., 1736.

<sup>3</sup> Parkinson (Thomas). On the application of spirit of wine to burns and scalds (Memoirs of the Medic. Society of London, 1799, t. v. p. 62).

<sup>4</sup> Earle (James). Obs. on the cure of the curved spine.... Also an essay on the means of lessening the effects of fire on the human body, 8vo. London, 1799.

<sup>5</sup> Leçons orales de clinique chirurgique, t. i.

<sup>6</sup> Glasgow Med. Journal. May, 1828.

<sup>7</sup> Vignal (E. T.). Essai sur la brûlure et son traitement par l'usage du poil du typho. Paris, 1833, 8vo.

<sup>8</sup> Rev. médic., 2 série, t. iii., p. 289. Arch. génér. de méd., t. xxvi., p. 240.

<sup>9</sup> Sabatier. Méd., opérat. édit. de M. Sanson, t. i. p. 506.—Larrey. Traitement des adhérences suites de brûlures. (Journ. Hebd., t. v. p. 30.)—Paillard. Sur les cicatrices de chaque espèce de degré de brûlure. (Journ. Hebd., t. viii. p. 163.)

<sup>10</sup> J. Thomson. Lectures on Inflammation, p. 585. Edinb., 1813.

<sup>11</sup> James (Med. Chir. Trans., v. xiii. 1825).

<sup>12</sup> Earle (H.). Two Lectures on Burns, 8vo. London, 1834.

<sup>13</sup> Abernethy (J.). Lectures on the Theory and Practice of Surgery, 8vo. London, 1830.

(To the above references, the essays of Kentish on Burns, 8vo., Newcast., 1798, London, 1800, and Dickinson's remarks, deserve to be added. Th.)

<sup>14</sup> Moulinié. Diss. sur les brûlures. Paris, 1812.

<sup>15</sup> Lisfranc. Revue médic. Juin, 1826.

<sup>16</sup> Bretonneau (L.). De l'utilité de la compression dans les inflammations idiopathiques de la peau. In-4. Paris, 1815.—Velpeau. Mémoire sur l'emploi du bandage compressif dans le traitement de l'érysipèle phlégmoneux, de la brûlure, etc. (Arch. génér. de méd. Paris, juillet, 1820.)

<sup>17</sup> Borot de Belloy. Observ. clinique sur le traitement de quelques maladies. In-4. Paris.

<sup>18</sup> Marshall. Obs. sur les brûlures, etc. Rev. méd., t. ix. p. 309.

<sup>19</sup> Lair (P. A.). Essai sur les combustions humaines. In-12. Paris, 1800.

<sup>20</sup> Arch. gén. de méd. In-8. Paris, t. x. p. ii.

PERNIO—CHILBLAIN.

Vocab.—*Chilblain, Pernio.*

997. Under the title of Chilblain, I designate collectively all the affections of the skin and subjacent tissues which are produced by the action of cold. These occur under three forms of progressive gravity; characterized in the first instance by an erythematous swelling, in the second by the formation of the phlyctenæ with or without excoriations, and in the third by the occurrence of gangrene. The two first stages only are usually comprehended under the name of chilblain.

998. *Symptoms.*—Chilblains attack those parts especially which are most remote from the centre of the circulation, such as the feet, hands, ears, and tip of the nose.

1st. In the most simple case, *erythematous chilblain*, the disease is characterized by a simple redness of the skin, accompanied with a troublesome feeling of pruritus, and a slight tumefaction of the subcutaneous cellular tissue.

The affection commonly makes its appearance slowly after the action of cold. The skin becomes pale at first, and afterwards assumes a red tinge, accompanied with swelling, and sensations of tingling and of numbness and stiffness in the parts affected, which increase in a remarkable manner, when these are exposed to the action of heat. Under the influence of the same cause, the swelling increases, and the redness of the skin acquires a livid and leaden cast.

If neglected, this first degree of chilblain is sometimes followed by chaps, and the other symptoms which characterize the bullous stage of the affection.

2d. This last is a severer species or degree of chilblain. The blebs or phlyctenæ most frequently appear on the palmar surface of the last phalanges of the fingers, the plantar surface of those of the toes, or over the hind part of the heel, and are flattened, and filled with a reddish sanguinolent serum. The skin on which they are evolved, has a livid or bluish-red appearance. If the disease is neglected, the epidermis is detached, and leaves exposed, grayish excoriations, of a mingled pallid and sanguinolent aspect, which are the seat of considerable pain. These excoriations are irregular in their shapes, and are occasionally observed of considerable depth and extent. Exposed to cold and moisture, and rubbed and pressed upon by the clothes, these excoriations are apt to chap, and to ulcerate, when they discharge an ichorous pus; they occasionally even become gangrenous in one or more points of their surface. The cicatrization of these sores is always obtained with great difficulty, particularly during the winter season.

3d. Finally, when the action of the cold has penetrated more deeply, the parts affected become cold, insensible, motionless, and assume a livid hue,—*gangrenous chilblain*; the cold sometimes causes a kind of mortification. During the winter of 1812, I attended a Spanish prisoner, both of whose feet, in a state of sphacelus from exposure to cold, had acquired a woody hardness. When patients survive these local congelations, a line of demarkation is by and by established between the mortified and living parts; when the former are not detached within a reasonable period of time, it becomes necessary to remove them with the knife.

999. Erythematous and bullous chilblains of the hands and feet do not usually occasion any disturbance in the exercise of the principal functions. Gangrenous chilblains, on the contrary, are frequently accompanied by very serious morbid phenomena, particularly if the action of the cold has been deep and of long duration, viz.: rigors, paleness of the surface, rigidity and numbness of the body generally, diminution of sensation, of the power of motion and of the temperature, slowness of the circulation, precordial anxiety, and stupor, followed by extinction of life.

1000. *Causes.*—Chilblains, in general, only prevail extensively towards the end of autumn and during the winter; they are particularly apt to attack washerwomen, hatters, dyers, &c., and weak, lymphatic, scrofulous children, over-tenderly brought up, whose skin is fine and delicate, or the children of the poor who, again, are not sufficiently protected against the inclemencies of the weather. They are most



frequently observed in temperate climates, and generally during cold or damp weather, and after sudden transitions from frost to thaw. M. Larrey relates that during the three or four days which preceded the battle of Eylau, the weather was extremely cold, the thermometer having sunk so low as fifty-four degrees below zero. Not one of the French soldiers who had remained in the snow during this intense cold, experienced any pain in the hands or feet. During the night of the 9th of February, there was a fall of sleet, and the thermometer rose to several degrees above the freezing point. From this moment many of those who had been exposed to the severe cold, began to complain of acute pains in the feet, and of numbness, and a sensation of heaviness, and tingling in the extremities. In some, the parts affected were but little altered in size or colour. In others a slight degree of redness made its appearance about the roots of the toes, and over the upper part of the foot. In many, however, the toes lost all sensation, and power of motion, becoming cold, and soon afterwards black, hard, and lifeless.

1001. *Diagnosis*.—The erythematous inflammation, and the puffing of the subcutaneous cellular membrane, the phlyctenæ, chaps and fissures, the ulcerations, gangrene, &c., that occur in consequence of chilblains, differ in their mode of development and the succession of their phenomena, from analogous lesions produced by other causes; to discover the characters which distinguish chilblains from burns, and erysipelas, it is therefore enough to study them comparatively under these two points of view.

1002. *Prognosis*.—Erythematous and bullous chilblains, whether with or without fissures, are affections less dangerous than troublesome. In serofulous subjects they are very rebellious to every kind of treatment. Sphacelation of the fingers and toes is to be apprehended when these parts, by exposure to intense cold, lose their sensibility, when they have a shrunk and withered appearance, and when they assume a purple or livid hue.

1003. *Treatment*.—The preservative treatment of chilblains consists in avoiding sudden transitions from cold to heat; in protecting the parts liable to be affected with them, from the influence of cold and moisture, and better still when this can be done with propriety, in gradually hardening the hands and feet and inuring them to the cold. The extremities should above all things be defended from moisture, and when they have accidentally been wetted with very cold water, and very considerable pain is complained of, they ought to be simply dried and covered, and allowed to get warm of themselves, without being exposed to the immediate action of heat.

Frictions with snow frequently repeated, lotions with salt and water, wine, camphorated spirits of wine, or any alcoholic fluid, tincture of Benzoin, &c.; or what is perhaps preferable to any of these, a solution of alum in water, in the proportion of one ounce to a pint, the artificial sulphureous water-bath, and the disuse of gloves lined with fur, and of woollen stockings, which defend the hands and feet too completely for a time from the action of the external temperature, are powerful preservatives against chilblains.

When the disease is characterized by a simple redness of the skin, and slight swelling of the subcutaneous cellular membrane, the parts affected must be bathed several times a day with a decoction of althea-root and poppy-heads, and the hands and feet enveloped at night in compresses soaked in goulard water.

Emollient and narcotic cataplasms, sprinkled with a solution of the acetate of lead, are useful applications to chilblains, which are accompanied with phlyctenæ, violent pain, and much swelling. The livid and fungous-looking sores that follow in these cases, require to be subsequently touched with the nitrate of silver, and dressed with soft pledgets, spread with saturnine cerate, which, being covered with compresses dipped in any mild astringent and discutient wash, the whole is to be supported by a firm roller. (a)

The parts affected must now be carefully protected from cold and damp; these measures generally prove sufficient to accomplish the cure of chilblains rapidly.

Gangrene may be prevented in parts which have been exposed for a length of time to very severe cold, by rubbing them with snow, or by

bathing them with icy cold water in the first instance, and using every precaution, only to allow the temperature to rise very gradually. When the circulation appears to be in some measure re-established, the parts affected may be fomented with cold spirit lotion, and wrapped in dry flannel, the patient being, mean time, made to take some warm and gently stimulating drink.

When gangrene has taken place, all we can do, is to wait until its extent is indicated by a circle of inflammation, and a line of separation begins to be established between the living and dead parts; this once formed, we may decide whether we shall allow the sphacelated parts to separate of themselves, or perform amputation.

#### Historical Notices.

1004. Celsus<sup>1</sup> has given a very accurate description of chilblains. Plouquet<sup>2</sup> mentions several dissertations on this disease, which I have not been able to consult. Dr. J. Thomson<sup>3</sup> has studied the effects of cold on the human body with particular care, and has given the details of many experiments made on animals, which prove that limbs which have been frozen, whose fluids have been fairly congealed, are incapable of being restored to life. M. Lisfranc<sup>4</sup> has lately recommended compresses dipped in a solution of chloride of lime, to be applied over the ordinary dressings applied to the sores that follow chilblains.

The history of gangrenous chilblains, or of the gangrene which is produced by congelation, has been given, with all its details, in more than one of our recent systems of surgery, as well as in several excellent inaugural dissertations.<sup>5</sup>

#### ANEMIA.

1005. A general morbid paleness of the skin and gums, joined to a state of habitual debility, without any lack of colour in the hair, uvea, or choroid coat, is sometimes observed in young females, affected with amenorrhœa or dysmenorrhœa. This state is familiarly known by the name of chlorosis.<sup>6</sup> In males, also, but much more rarely, a peculiar pallor or sallowness of skin has occasionally been observed, independently of anterior hemorrhage, intermittent fever, a cancerous diathesis, &c., but merely connected with a weakly state of the constitution generally.

These *general anemia*,<sup>7</sup> or bloodless states of the body, may depend on various causes; their history is still incomplete, and I limit myself in this place to simply mentioning these phenomena.

I have observed the hands and feet of many individuals, in all respects in very good health, become suddenly extremely pale and very cold, as if they had been plunged in icy cold water. This species of local anemia evidently occurs without any lesion of the arteries of the extremities, and is sometimes altogether independent of the temperature of the atmosphere, for I have seen it happen during summer, and have known it continue for several days without derangement of the principal functions.

<sup>1</sup> Fiunt etiam ex frigore hiberno ulcera, maximè in pueris, et præcipue pedibus et digitis eorum, non nunquam etiam in manibus. Rubor cum inflammatione mediocri est. Interdum pustulæ oriuntur, deinde exulceratio, dolor autem modicus. Prurigo major est; non nunquam humor exit, sed non multus, qui referre vel pus vel sanie videtur. (Celsus. De re medicâ, lib. v. sect. xxviii. § 6.)

<sup>2</sup> Plouquet. Litteratura medica digesta.—Art. Pernio.—Aymes (J. P. C. A.). Diss. sur les engelures, 4to. Montpellier, 1813.

<sup>3</sup> J. Thomson. Traité medico-chirurgical de l'inflammation. Traduction de MM. Jourdan et Boisseau, in-8. Paris, 1827, p. 638.

<sup>4</sup> Lisfranc. Obs. d'engelures traitées et guéries par la chlorure de chaux. (Revue médic., 1826, t. i. p. 210.)

<sup>5</sup> Houin (F.). Exposé sur le congélation. Paris, 1813.—Stockly. Sur la gangrène par congélation. Paris, 1813.

<sup>6</sup> Désormeaux. Art. chlorose, Dict. de méd., en 21 vol.

<sup>7</sup> Hallé. Obs. sommaire sur une maladie qu'on peut appeler anémie (Journ. de Méd. et Chirurg. de Corvisart, t. ix. p. 3).—Elliotson. Anémie et ictère (Gaz. Méd. 4to. Paris, 1833, p. 83).—Journ. des progrès, t. i. p. 269.—Valat. Coup-d'œil sur les maladies des ouvriers des mines. (Bulletin génér. de Thérapeutique, 1834, t. vii. p. 185.)

(a) The chlorides of lime and soda are excellent applications in these cases.



## SANGUINEOUS CONGESTIONS.

1006. Several of the sanguine congestions which are observed on the surface of the body, depend on an impeded or retarded venous circulation. Such are those which may be produced at pleasure by the application of a tight ligature round any of the limbs; of the same description are those also which occur in the feet and in the extremities, in diseases of the heart, in the asphyxia of new-born infants, &c. The sanguine congestions which appear over the cheek bones in pneumonia, and the livid blotches which are observed on the posterior parts of the trunk, at the moment of dissolution, or after death, are in like manner attributable to impeded venous circulation.

It is well known that these livid blotches (*maculæ morientium*) are chiefly found occurring in those parts on which the body has lain during dissolution, or after death, and that they are sometimes observed to extend over the whole posterior surface of the body and limbs. Their bluish tint is in general not so deep as that of ecchymoses.

When the skin of the regions thus marked is incised, it is found gorged with dark blood. It is sometimes even possible to cause these livid marks to disappear, by giving the body, at the time of dissolution, or immediately after death, a position different from that in which they had been formed.

Congestions, again, which are occasionally preceded by morbid paleness, appear to be owing to an anomalous influence of the system; such is blushing or the redness of the face which is caused by emotions of various kinds, and that which is observed in the second stage of intermittent fever.

Whatever the cause of sanguine congestion of the skin, whether the afflux of blood be transient and accidental, intermittent or continuous, it is distinguished from every form of exanthematous inflammation by the latter being constantly accompanied with morbid heat, or followed by furfuraceous desquamation of the cuticle.

Sanguine congestions of the skin are not in themselves of a serious nature, but they are often symptomatic of highly dangerous affections of the heart, lungs, &c. Congestions do not require any treatment other than that proper for the diseases which produce them.

In persons labouring under contraction of the auriculo-ventricular orifices of the heart, or of the pulmonary orifice of the right ventricle, under congenital or accidental communications of the right cavities with the left, or with the principal arterial trunks, &c., a peculiar sanguineous injection of the skin, and mucous membranes, is observed; these present a livid bluish tint, and the state is known by the name of *cyanosis*.<sup>1</sup> It is distinguished from other congestions by its causes, its generality, its continuance, and by a more or less marked disturbance in the functions of respiration and circulation.

## HÆMORRHAGIÆ.

1007. The diseases in which blood is deposited on the surface of the skin, within its substance, or in the cellular membrane underneath it, have received different denominations, according as the extravasations are altogether local (*ecchymosis*, *thrombus*), or general (*purpura*), or phenomena superadded to some other affection more or less serious in its nature (*petechial typhus*, *scurvy*). Further, those effusions of blood which are occasionally observed from the surface of the skin, when accidentally deprived of epidermis, and even when still covered with the cuticle in new-born infants, have been designated by the name of *dermatorrhagiæ*.

<sup>1</sup> M. Gintrac (Observations et recherches sur la cyanose, in 8vo., Paris, 1825), has published a very good monograph of cyanosis; and has collected and compared a great number of facts for the purpose of determining the organic conditions, which may give rise to this phenomenon. M. Louis (De la communication des cavités gauche du cœur, Mémoires d'Anatomie Pathologique, in 8vo., Paris, 1826), and Messrs. Bertin and Bouillaud, (Traité des maladies du cœur et des gros vaisseaux, 8vo., Paris, 1824,) have made some observations on this disease which deserve to be consulted.

*Petechiæ* are minute red or violet-coloured spots formed by small quantities of blood deposited within the substance of the skin. The name of *ecchymoses* has been given to spots of a larger size; these are generally of a ruddy violet-colour, often livid and sometimes quite black; they are commonly of a deeper hue in the middle than in their circumference, and they vary in extent from a diameter of a few lines to one of several inches. These two varieties of spots are to be observed in all cutaneous hæmorrhagiæ, whatever their causes and characters.

The sanguineous infiltrations which take place in scurvy and in petechial typhus,<sup>2</sup> as well as those which occur incidentally in certain diseases of the skin, in severe erysipelas, in malignant scarlatina, and in the eczema rubrum of the inferior extremities, can only be studied in connection with these diseases. The ecchymosis traumatica, or ecchymosis which occurs in consequence of a blow, &c., is described in all treatises of surgery.

## PURPURA.

Vocab. Art. *Purpura*, *Hæmorrhæa*, *Hæmaceliosis*, *Land Scurvy*, &c.

1008. I comprehend under the general name of *purpura*, several diseases whose common and generic character is to manifest themselves internally by hæmorrhage, and on the external surface of the body by petechiæ or ecchymoses, independently of outward violence.

This group comprises two *species*, which are very distinct from each other in their progress, and in the symptoms associated with the common hæmorrhagic phenomena which characterize them; viz., *purpura sine febre*, and *purpura febrilis*.

*Purpura sine febre* itself comprehends three varieties (*purpura simplex*, *purpura urticans*, *purpura hæmorrhagica*), to which *purpura senilis*, and *purpura cachectica*, must be added as sub-varieties. *Purpura febrilis* may present the external and hæmorrhagic characteristics according to which the varieties of *purpura apyretica* have been established. The disease which has been described under the title of *febris hæmorrhagica* must be associated with febrile *purpura*.

1009. *Purpura simplex*. This disease almost always commences independently of any known causes, and without marked derangement of the principal functions. Some patients, nevertheless, complain of lassitude and dejection some days before the appearance of the spots. These are generally true *petechiæ*, sometimes intermixed with *ecchymoses*; in some very rare cases ecchymoses only are to be distinguished on the exterior of the body.

1010. When the eruption is petechial<sup>3</sup> only, the disease may present a considerable variety of appearances according to the number of the spots, as they are disseminated over nearly the whole surface of the body, or limited to a certain number of regions, and as the petechiæ have all been evolved at once, so as almost everywhere to present the same hue, or as they have appeared successively, during the course of several days, when they present a mixture of recent and old spots, and vary in colour, from a reddish-brown to a clear yellow.

In ordinary cases, the petechiæ show themselves principally on the

<sup>2</sup> Petechiæ frequently supervene in typhus between the second and tenth day. According to the report of Messrs. Raickem and Bianchi, out of a hundred and ninety-four subjects attacked with typhus at Volterra, in 1817, a hundred and fifty-six exhibited petechiæ. In typhus, the petechiæ generally show themselves on the lateral parts of the neck, on the shoulders, thighs, and especially on the interior of the forearms from the elbows to the wrists. True petechiæ are rarely observed at Paris in typhus fevers—(dothinerites)—they supervene more frequently in variola and scarlatina. They are sometimes observed with ecchymoses in those animals, into whose veins putrid animal matters have been injected.

<sup>3</sup> Sauvages describes simple petechial *purpura*, under the title of phænigmus petechialis: "Est exortus macularum purpurearum in universa cute—sine pruritu, tumore, alioque symptomate. Differt a publicum morsu quod in maculis phænigmi non sit punctura vestigium, ut in pulicem, apum morsibus, quos delet cataplasma ex farina, aceto et oxymelite. Hunc affectum vidi aliquoties in pueris ob calorem æstivum enasci sine ullâ notabili functionum læsione, et potu refrigerante et dein levi cathartico adhibito, inter paucos dies evanescere. Illust. vero, Professor Haguénot similem observavit in tribus mulieribus, quas quidem ille morbus defœdabat, sed aliunde nullatenus molestabat, quique intra aliquot dies spontè recessit (Sauvages, Nos. Meth. t. ii. pp. 594-95).—Voyez.: Acta phys. med. nat. cur., 1757, p. 386.—Cusson. Diss. de purpura, 1762. Monspel. (Purpura apyretica).—Parry. Edinb. Med. and Surg. Journ., vol. vii.—Bree. Medic. and Physic. Journ., vol. xxi.



legs; a great number are sometimes seen upon the face, which, at a certain distance, appears pricked with blackish and yellowish points, as if it had been bitten by a host of fleas. In this case the conjunctivæ are apt to exhibit a number of ecchymoses.

The distinguishing character of petechiæ, which are, as has been said, formed by a very small quantity of blood shed into the substance of the skin, is that they undergo no change of colour under the pressure of the finger. In this, consequently, they differ from other small red or rose-coloured spots observed in typhus and typhoid fevers, which are immediately effaced by pressure, and return when it is removed. The greater number of these petechiæ are not quite so large as a flea-bite; for the latter, besides the small ecchymosis produced by the suction of the insect, is surrounded by a narrow pink areola, capable of being obliterated by pressure, which is not observed in the spots of purpura. Some spots, of larger dimensions, and even proper ecchymoses, are often interspersed among the ordinary petechiæ. These petechiæ and ecchymoses are developed without local heat or pain, or any implication of the principal functions; children affected with them continue their play, and persons of more advanced age do not cease, in general, to occupy themselves with their ordinary affairs; the pulse remains undisturbed, and the digestion, respiration, excretions, and nervous functions, continue to be performed as in a state of health.

Shortly after its formation, each petechia undergoes a change of colour; from a reddish brown it passes through various intermediate shades to a yellow; and, unless where there is a cachectic state of the constitution, the blood which has formed it is generally reabsorbed in the course of a fortnight. This reabsorption almost always proceeds from the circumference towards the centre of the spots; I have, however, seen it take place in a contrary direction, so that the spots, in the last stages of their duration, assumed the appearance of little yellow rings or arcs. These spots are not prominent, except in those very rare cases in which the blood is not only shed into the skin, in the form of a dark point, but where a minute drop of the fluid is effused beneath the epidermis, which it raises; this little eminence, of the size of a pin's head, dries up into a small dark crust.

1011. When the eruption of petechiæ is considerable, they occasionally appear collected in different places into irregular clusters. This disposition is very rare. Finally, in a few very rare cases, a kind of marbling, of a light violet colour, like the eruption in *rubeola nigra*, is observed disseminated among the petechiæ.

1012. The petechial eruptions which characterize this form of purpura *simplex*, of infinitely more frequent occurrence than the other eruptions of the same nature, are not accompanied by epistaxis, hæmatemesis, hæmoptysis, nor by any other internal hemorrhage; they are, however, pretty frequently intermingled with real ecchymoses of the skin and subcutaneous cellular membrane.

1013. There are even cases in which purpura *simplex* is characterized by considerable numbers of ecchymoses disseminated over the body and limbs, on which very few or no petechiæ are to be seen. When the blood is thus more widely effused into the substance of the skin, it is almost always over the dorsal surface of the feet and hands, and on the internal aspects of the limbs that the broader spots are encountered. These never exhibit any thing like regularity of shape, and sometimes bear no slight resemblance to the marks left by the strokes of a whip, or violent bruises. In the intervals between the ecchymoses the skin preserves its natural colour, temperature and sensibility. The colour of these spots, which is a dark or livid blue, remains stationary for several days, and fades more slowly than that of the subcutaneous ecchymoses. They are sometimes succeeded by an exfoliation of the epidermis, particularly when a certain quantity of sanguinolent serum has been effused under it, so as partially to detach it; this happens to such an extent in some cases that the skin appears beset with a number of sanguinolent bullæ or phlyctenæ.

1014. When the blood is effused into the subcutaneous and intermuscular membrane, the skin commonly presents a number of broad and slightly prominent spots, dark in the middle and of a greenish-yellow towards the circumference. These spots are little, if at all, painful; but when the blood has been shed in large quantities into the subcutaneous cellular substance of the lower extremities, as sometimes happens, more especially in purpura hæmorrhagica, the tumefaction

and tension of the parts may be so considerable as to produce a rather intense degree of pain. In this case, the entire skin of the inner aspect of the leg is of a greenish-yellow hue, which only disappears with extreme slowness. A sort of œdematous swelling has been observed to occur on the back of the hand in certain cases of purpura *simplex*, characterized by similar ecchymoses.

In purpura *simplex*, the petechiæ and ecchymoses sometimes return suddenly in a single night, just as the disappearance of a first eruption seemed to indicate the complete re-establishment of the health. These hemorrhagic phenomena may be repeated at periods so little remote from one another, that each succeeding attack appears like that which has gone before it; some of the spots are then yellow or nearly effaced; others, very recently evolved, are of a reddish-brown; while others of intermediate standing are of a paler red. It often happens, too, shortly after an apparent cure has been accomplished, that a new eruption shows itself; so that the duration of purpura *simplex* can never be predicted: it varies from a few weeks to several months.

1015. There is a last variety of purpura *simplex* in which the extravasation of the blood is preceded by the formation of reddish oval or circular-shaped spots, prominent and accompanied by smarting or tingling sensations similar to, but much less decided than, those of urticaria (purpura *urticans*).<sup>1</sup> These little spots, usually of the size of a lentil, sink at the end of two or three days to the level of the surrounding skin; their colour, which was pink at first, becomes at the same time deeper and livid. New spots appear while the first are going off. They appear most frequently upon the legs, and sometimes in other regions of the body, intermixed with true petechiæ; the lower extremities in these cases are often œdematous; or they become affected with a sensation of stiffness or heaviness. The eruption is generally of a month's duration, but may continue beyond that term.

Purpura *urticans* can only be distinguished from hemorrhagic urticaria, *i. e.*, urticaria in which a little blood is effused into the wheals, when numbers of true petechiæ are found interspersed among the larger raised spots. Cases of urticaria have been met with, which were followed by an attack of purpura sometimes of a pretty severe character.

The spots of purpura *urticans* are broader than those of petechial purpura; but are not so extensive as the ecchymoses of purpura hæmorrhagica, which are besides more irregular in their outline. The spots of purpura *urticans* sometimes exist on the skin without being accompanied with true petechiæ and without primary ecchymoses; but there are cases in which these three appearances are found united in the same individual.

When purpura *simplex* shows itself under the form of ecchymoses, it is generally a more serious disease than when it appears under the petechial form. Purpura *urticans* is the least important of all the forms of purpura.

1016. Purpura hæmorrhagica (*morbus maculosus Werlhofii*). This species of purpura is of a much more serious nature than the species first described. It is sometimes preceded for several weeks by a sensation of lassitude and debility, by pains in the limbs, &c.; but it often makes its attack suddenly<sup>2</sup> upon persons apparently in the enjoyment of good health.

Purpura hæmorrhagica is characterized by the same external appearances as purpura *simplex*, sometimes by petechiæ, often by ecchymoses, still more frequently by both of these hemorrhagic forms at the same time, but very rarely by an actual dermatorrhagia.<sup>3</sup> In the ma-

<sup>1</sup> Macmichael has seen a case of purpura which appears to have been preceded by an intermittent urticaria, for six or eight months, and which was cured by means of purgative medicines. Lond. Med. Gazette, vol. ii. p. 90. A case of purpura *urticans* has been inserted in the Edinb. Med. and Surg. Journ., vol. xii. p. 243. Bate-man, Reports on the Diseases of London, 8vo. London, 1819, p. 181.

<sup>2</sup> Joannes Doleus speaks of a child: "Cujus omne corpus, absque dolore, febre aut lassitudine prægressâ, subito unâ cum facie, labiis, et lingua, ubi mane adsurgere, numerosissimis maculis lividis et nigerrimis obsitum fuit," etc. (Ephem. Nat. Cur., Dec. ii. ann. iv. obs. 118.) Zwinger (Act. Nat. Cur., vol. ii. obs. 79), P. G. Werlhof (Commerc. liter. Norimberg, ann. 1735, Hebd. 7 et 2) have reported analogous facts. Sauvages mentions this disease under the title of Stomacace universalis. (Nosol. Meth., t. ii. p. 296.)

<sup>3</sup> I have not observed this transudation of blood through the skin. It is asserted that in the majority of cases, the skin from the surface of which the blood flows, is not sensibly injured. Nevertheless, in a case reported by Doctor Whytt, the end of a finger whence the blood flowed was painful, and exhibited a red spot. Plouquet (Art. Hæmatidrosis, sudor cruentus) mentions several authors who have observed



majority of cases the ecchymoses appear before the petechiæ. The body has been seen to become covered with livid spots similar to those that follow bruises; in children actual thrombus occasionally forms under the hairy scalp, and the blood has even been seen exuding from behind the ears and the vertex, and the eruption of such extent as to cover nearly the whole of the skin. The disposition to hemorrhage is so great in some patients that the mere act of feeling their pulse, the pressure of a bleeding fillet, or that occasioned by the weight of the body in sitting or lying down, is sufficient to produce actual ecchymoses. In these cases the slightest punctures, the most trifling injuries that merely graze the skin, are always followed by a far greater amount of hemorrhage than usual; blood also occasionally flows copiously from the surface of blisters, issues, ulcers, &c., in such subjects. The number of petechiæ and ecchymoses in purpura hæmorrhagica is likewise almost always more considerable than in purpura simplex; and they recur with more promptitude and intensity, and continue longer than in the latter.

But the essential or distinguishing feature of purpura hæmorrhagica consists in the hemorrhage from the viscera or internal membranes, which invariably precedes, accompanies or follows the ecchymoses or effusions of blood into the skin or subcutaneous cellular membrane. The disease is always complicated with epistaxis, intestinal hemorrhage, hæmoptysis, hæmatemesis, hæmaturia, and, in females, with metrorrhagia.

Of all internal hemorrhages, epistaxis is that which occurs most frequently, particularly in children; metrorrhagia in females, and pulmonary and intestinal hemorrhage are common in adults. Several of these varieties of hemorrhage often occur simultaneously, or they alternate at different times in the same patient. (a)

1017. The general characters of the disease, which are always striking, are modified by diversity in the local symptoms, and, indeed, these vary themselves, according as the hemorrhage occurs from organs of greater or less relative importance in the economy, as the blood lost is small in quantity or very large, as the flux is frequently repeated or occurs at distant intervals, or as the hemorrhage takes place from one point in succession or from several simultaneously.

1st. Purpura hæmorrhagica with epistaxis<sup>1</sup> is the most common of all the varieties. Bateman has seen it accompanied by hæmatemesis and followed by death, from sheer loss of blood.

2d. Purpura hæmorrhagica with hemorrhage of the throat, or only of the amygdalæ,<sup>2</sup> is rather a rare variety; sometimes the whole fauces appear of a deep red and the blood issues from every part; after the hemorrhage has ceased, the parts appear dark. In one case in which there existed but an inconsiderable number of petechiæ on the skin I have seen purpura complicated with angina membranacea; this complication has even been observed under an epidemic form.<sup>3</sup>

3d. Purpura hæmorrhagica, with hemorrhage from the mouth and gums,<sup>4</sup> is often accompanied by epistaxis<sup>5</sup> and hæmatemesis.<sup>6</sup> The gums are livid, spongy, and the blood exudes from their free edge;

(a) Dr. Huston (*North Amer. Med. & Surg. Jour.*, vol. ii.), gives an account of a case of purpura occurring in an infant forty-eight hours after birth. A few hours afterwards there was a discharge from the vagina resembling the menstrual flux in its colour, want of coagulability and in its being accompanied by mucus. This discharge continued at intervals until the time of death, which took place on the eighth day after birth. When the vaginal discharge ceased, the patient was tormented with spasms.

these blood-sweats or hemorrhages through the skin. Fournier cites two examples of the kind. Art. cas rares. (*Dict. des Scien. Méd.*)

<sup>1</sup> Latour (*Hist. Phil. et méd. des hémorrhagies*, 8vo. Paris, 1828, t. ii. p. 192, obs. 612).—Rogerson (*Med. and Phys. Journ.*, vol. xlii.—With hæmatémésis).—*Medic. Repository*, vol. vi.

<sup>2</sup> Buxton (*Medic. Repository*, vol. xix.).

<sup>3</sup> Read. *Histoire de l'esquinancie gangréneuse pétéchiale qui a régné dans le village de Moivron*, Metz, 12mo. 1777.

<sup>4</sup> Nicholl (*Medic. Repository*, vol. xvi.).—Latham (*Lond. Medic. Gazette*, v. i. p. 544.).—Watson (*Lond. Med. Gazette*, v. vii. p. 128, 1830).

<sup>5</sup> Harty. [*Edinb. Med. and Surg. Journ.*, vol. ix.].—Duncan [*Med. and Surg. Journ.*, No. 21].—Planchon. [*Journ. de méd. de Paris*, année 1770.] [Two cases.]

<sup>6</sup> Harty (*Edinb. Med. and Surg. Journ.*, vol. ix.).

the tongue is livid and blackish,<sup>7</sup> bleeding and fungous in appearance, and twice its natural size; the inner surface of the cheeks presents some blackish and soft patches, and the palate is covered with blackish spots. Children have been seen to die in a single night after excessive hemorrhage from the mouth or nose; but they more commonly sink from the effects of bleeding, which, though less abundant at any one time, has recurred frequently during several weeks. The epithelium is sometimes raised on the tongue, palate, inside of the cheeks, lips, &c., in consequence of ecchymoses. It then forms irregular phlyctenæ or bullæ filled with blackish blood; by and by the epithelium bursts, and the blood flows from the surface of the excoriation; the mucous membrane often ulcerates more deeply, and hemorrhage to a greater amount is apt to take place.

4th. Purpura with hemorrhage from the stomach is sometimes accompanied with pain in the left hypochondrium, and an increase in the size of the spleen: symptoms which have been more particularly observed in individuals who have been attacked with purpura after having suffered from intermittent fever.

5th. Patients more frequently pass blood by stool; the blood is rarely pure, and of a bright colour; it is often a blackish-looking matter, of a sooty colour: this variety of purpura is less serious than the preceding one.

6th. When the blood flows by the urinary passages,<sup>8</sup> the urine is tinged with the blood, or the fluid is passed unmixed, partially coagulated, and sometimes in considerable quantities, without even the urinous odour. Blackall<sup>9</sup> has found the urine coagulable by heat, or nitric acid in four cases of purpura without hæmaturia; all the patients had the legs slightly infiltrated with serum. In one case of purpura hæmorrhagica, with febrile symptoms, Doctor Coombes remarked, that the urine which was very coagulable in the height of the disease, becomes less so after blood-letting, and abundant loss of blood; these evacuations of blood were of evident advantage, and when the cure was effected, the urine ceased to be coagulable.

7th. In purpura with hemorrhage from the uterus, the vagina,<sup>10</sup> or the pudenda,<sup>11</sup> patients often experience pains in the loins. These hemorrhages of the uterus are almost always serious; I have seen a case in which the bleeding was mistaken for a miscarriage, and the patient died. It very rarely happens that such hemorrhages are salutary, or critical; nevertheless Bateman met with a woman affected with purpura simplex, who recovered after an attack of uterine hemorrhage.

8th. When hemorrhage takes place from the lungs,<sup>12</sup> patients have fits of coughing, spit blood or bloody matter, and feel great pain in the præcordia and chest. Duncan and Bateman have seen the description of hemorrhage under review prove rapidly fatal.

9th. Finally there are cases in which hemorrhage occurs successively, and in a few days from the nasal fossæ, from the mouth, from the lungs, from the stomach, the intestines,<sup>13</sup> &c.; in some cases the bleeding recurs at particular hours, in others there is a slow and almost continual exudation of blood.

If hemorrhage recurs frequently or proves very abundant, from whatever channel it may flow, the lower limbs become œdematous, the face pale, and the body generally assumes a livid and yellowish hue; the petechiæ and the ecchymoses, greater in number, have a deep brown tint, the blood becomes more and more serous, the extremities cold, the patient experiences weakness, the pulse becomes small and frequent; nervous symptoms, sometimes convulsive movements, trembling of the whole body, and fainting fits occur; and if the hemorrhage is repeated, the patient dies ex-sanguine, unless febrile symptoms supervene and give rise to some other form of fatal termination. In fact, after a certain number of attacks of hemorrhage,

<sup>7</sup> Harty, loc. cit.

<sup>8</sup> Rogerson (*Med. and Physic. Journ.*, vol. xlii.). G. Johnson (*Med. and Surg. Journ.*, No. 72). Harty (*Edinb. Med. and Surg. Journ.*, v. xxxiv. p. 57).

<sup>9</sup> Blackall (John). *Obs. on the nature and cure of dropsies*, 3d edit. Lond. 1818, p. 123, ch. viii. Cases resembling land-scurvy.

<sup>10</sup> Case of purpura hæmorrhagica with remarks. (*Edinb. Med. and Surg. Journ.*, vol. xvii. p. 83.)

<sup>11</sup> Pretty. *Med. and Physic. Journ.*, vol. xlix.

<sup>12</sup> Kift. *Edinb. Med. and Surg. Journ.*, v. xxvii. p. 71.—Planchon. *Journ. de méd.* Paris, ann. 1770 (two cases).

<sup>13</sup> Latour. (*Ouv. cité*, tom. ii. p. 180. Case from Horst.)—*Ibid.* t. ii. p. 20. Obs. 621.—*Ibid.* t. ii. p. 498. Case of Leroy erroneously quoted as a case of scorbutus.



an acute fever, with symptoms of a typhoid character, sometimes comes on, and patients frequently sink on or about the twelfth day.<sup>1</sup>

1018. *Purpura febrilis*. This description of purpura may be sporadic or epidemic;<sup>2</sup> its ordinary duration is from two to three weeks. *Purpura febrilis* attacks persons of all ages, and of every variety of constitution.

A feeling of great lassitude and depression, shivering fits, of longer or shorter duration, followed by heat, pains in the back and limbs, headache, and oppression, sometimes a sensation of great heat over the whole of the body, nausea, retching, quickness of the pulse, and other febrile symptoms, are the precursors of the petechiæ or ecchymoses. They appear from the third to the sixth day, sometimes without hemorrhage from the mucous membranes, or the viscera (*purpura febrilis simplex*).

Frequently, in *purpura febrilis*, after the initiatory fever, the eruption of petechiæ is preceded by *exanthematous spots*,<sup>3</sup> analogous to those of *urticaria febrilis*. The skin, already red, is then covered with petechiæ of a purple colour, the dimensions of which vary from that of the head of a very small pin to that of the tip of the little finger. These last are slightly prominent.

1019. *Purpura febrilis* may appear under the form of *ecchymoses*. M. Ollivier d'Angers<sup>4</sup> observed a curious case of this kind in an infant, three years of age, which he gave me an opportunity of seeing, in whom the cutaneous ecchymoses made their appearance on the limbs at the same time that these became œdematous. The skin was hot and painful; the pulse from 120 to 130 in a minute; the child experienced pain in the abdomen; the pressure of a garter, or of the finger, was sufficient to produce an ecchymosis. This child was cured after a month's illness.

1020. In *purpura febrilis*, after the primary fever, hemorrhages occasionally occur from one or other of the different passages of the body, at the same time that petechiæ and ecchymoses are formed in the skin, and subcutaneous cellular tissue (*purpura febrilis hæmorrhagica*).<sup>5</sup> In some patients the urine is highly tinged with blood; the pulse, small and contracted, in the first instance, sometimes ac-

quires more strength and softness after a first hemorrhage; but upon further loss of blood, all the symptoms which I have mentioned in treating of *purpura hæmorrhagica non-febrilis*, may occur.

*Purpura febrilis* may present, from the commencement, very serious symptoms, and terminate, in a few days, in death, when blood is extravasated, in large quantity, into the tissue of the lungs or substance of the brain.<sup>6</sup>

1021. We must assimilate a species of *hemorrhagic fever*<sup>7</sup> to *purpura febrilis*, inasmuch as it only differs from *purpura febrilis hæmorrhagica*, by the absence of ecchymoses and petechiæ. In this fever, after symptoms of a more or less violent character, hemorrhages from the nose, mouth, intestines, urinary passages, &c., take place. These general hemorrhages are sometimes not accompanied with fever in the beginning, but it generally appears after an interval of a few days.

These general hemorrhages have been seen to alternate with determinations of blood to particular organs, as the tonsils, &c.

1022. *Purpura senilis*. Under this name, Bateman has described a variety which he has only observed in old women, and in which ecchymoses, of a very deep-red brown colour, irregular in their form and dimensions, appeared principally along the outsides of the forearms. Each of these spots lasted only from ten to twelve days; but in one case, Bateman saw them return at different times, during the space of ten years, all the while, without any particular derangement of the health occurring. I have myself, several times, observed similar spots on the same parts, and on the backs of the hands of elderly people of both sexes. I ought to add, that in all these cases, this description of ecchymosis lasted much longer than in those mentioned by Bateman, generally longer than a month. The spots were of the colour of wine lees, and bore a pretty strong resemblance to particular nævi; they did not disappear upon pressure.

This *ecchymosis senilis* must not be confounded with true purpura which may also attack the aged.<sup>8</sup>

1023. Certain eruptions of petechiæ and ecchymoses may be regarded as marking states approaching to *purpura senilis*, which is sometimes seen in individuals labouring under enteritis, chronic peritonitis or other serious diseases, followed by the cachectic constitution. As for the ecchymoses and petechiæ, which appear on the lower limbs of patients, affected with asthma, or diseases of the heart and in dropsy, the sanguineous infiltrations are probably the effect of two causes: an impediment to the venous circulation, and some modification of the blood.<sup>9</sup>

<sup>6</sup> Zacutus Lusitanus speaks of a patient whose whole body was livid, and who, during two days, was in a general bloody sweat, and became covered before death with a perfectly black eruption. In another place, he relates that several persons, who had been cupped in this disease, bled so profusely that it was impossible to stop the hemorrhage by any means, so that they all died. [Praxis medica miranda, obs. 41, 42.]

<sup>7</sup> M. Littré showed me a young man who for several days had laboured under hæmoptysis, and hemorrhage from the nose, intestines and urinary passages [Gazette medic. de Paris, 1833, p. 263]. Petrus Poterius, (obs. et curat. insig. cent. iii. 60,) has published a similar case. Morgagni states, that in the year 1200, a great number of men died in Etruria and Romagna, in twenty-four hours, in consequence of a flow of blood from the nostrils. [De sedib. et caus. morbor. Epist.]

<sup>8</sup> Latour, op. cit. t. xi. p. 27.

<sup>9</sup> The patient Pierre, sixty-nine years of age, had been for several months at the Hôpital de la Pitié, when he was attacked on the 6th Feb. 1826, without any apparent cause, with pain in the epigastrium, diarrhœa, and loss of appetite; the tongue was red and dry, the thirst great, the pulse weak, and not frequent. These symptoms were met by abstinence, demulcent drinks, and emollient poultices applied to the abdomen; the symptoms continued, and the patient sank more and more. On the 23d, the tongue was dry and brown, the pulse slow and weak; large ecchymoses appeared on the inside of the lower limbs, and he died the 7th Feb., 1826.—Secto cada-veris, thirty-six hours after death. On the right leg towards the anterior and inner surface of the tibia, the skin appeared livid, and below it was a large ecchymosis, six inches long and three inches broad. Black blood was extravasated into the subcutaneous cellular tissue, with which it may be said to have been combined; similar subcutaneous ecchymosis had taken place in the sub-aponeurotic cellular tissue of the leg; the subcutaneous cellular tissue of the whole of the outside of this leg was infiltrated in the same manner with black blood. This infiltration was much more considerable than would have been imagined from the external appearance of the limb. There were no ecchymoses in the cellular tissue of the sole of the foot: but it was bathed in a reddish serum. The vena saphena contained very little blood. There were ecchymoses in the tibialis posticus, and similar sanguineous infiltrations in the subcutaneous cellular tissue of the outside and inside of the thigh. Some were also discovered under the crural aponeurosis, and in the cellular tissue between the rectus femoris, and the triceps; the lower left limb presented similar alterations, and was surrounded under the skin with an infiltration of black blood. The right arm presented subcutaneous, sub-aponeurotic, and inter-muscular ecchymoses. The left arm did not present any. Thorax. A great quantity of adipose tissue, deposited

<sup>1</sup> Duncan, jun. (case of *purpura hæmorrhagica*, Edinb. Med. and Surg. Journ., vol. xviii. p. 405).

<sup>2</sup> Lordat observed in the prison at Montpellier, a hemorrhagic petechial fever which appeared in the spring of the year 1800, lasted five months, reappeared towards the middle of September, 1804, and continued till the month of January, 1808. This description of fever attacked nearly one half of all the women who were confined there, and no more than two men. It began by a shivering fit, followed with intense fever and depression, pain in the head, acute suffering in the epigastrium, redness of the face, white tongue, scanty and scalding urine, constipated bowels, &c. This state continued for three days; on the fourth, the fever abated, and an eruption of petechiæ took place on the neck, breast, upper part of the arms, trunk, &c. After the eruption had appeared, the fever and the hemorrhage, which was generally from the nose and the uterus, subsided at the same time; towards the ninth day the spots usually disappeared. After several days of apparent convalescence, a relapse often occurred, and these relapses were sometimes repeated: no one died. Some women, after several relapses, became decidedly scorbutic. Latour (op. cit. p. 170). Vandermonde, Journ. de Med., t. vi. p. 339, *maladie noir d'une espèce particulière*, has recorded a remarkable case of *purpura febrilis*. We must assimilate to these cases the accounts we have of a disease observed among deserters who were brought by forced marches to a place of confinement, and whose bodies became covered with petechiæ and ecchymoses, and in whom nothing succeeded in stopping the nasal and intestinal hemorrhages. (Latour, op. cit. t. ii. p. 469.) See a case of Sporlus, cited by Fabricius Hildanus (obs. chir. cent. vi.). Th. Schwenck, Sang. Hist., p. 130.

<sup>3</sup> During the summer of 1797, Latour saw at the Hôtel Dieu of Orleans, a great number of reapers, the whole of whose bodies, after great lassitude in the limbs, irregular shivering fits, and vertigo, became redder and hotter than usual, whilst the head was heavy and painful, the pulse very full, and the beating of the carotid arteries extremely violent; the tongue was at the same time red and dry, the thirst urgent, the urine scanty, the bowels relaxed, the breathing occasionally interrupted by sighing, &c. On the second and third days of the attack, exanthematous patches appeared over the skin, which looked as if it had been whipped with nettles. Towards the fifth or sixth day innumerable brown and black petechiæ, of a lenticular shape, appeared in the middle of the exanthematous blotches; the fever commonly subsided about the fourteenth or fifteenth day, and always before the one and twentieth, and the petechiæ vanished, becoming yellowish, like ecchymoses, as they declined; the disease was not fatal in its tendencies. Latour (Hist. Philosoph. et med. des hæmorrhagies, vol. ii. 8vo. Paris, 1828, tom. ii. p. 172, and Sequent) relates another case of this species of hemorrhagic nettle-rash, which after beginning with delirium, and other serious symptoms, terminated happily on the fifteenth day. See an analogous case published by Johnston, (Edinb. Med. and Surg. Journ., vol. xviii. p. 402,) who very justly remarks that this case of *purpura febrilis hæmorrhagica* differs materially from the ordinary *purpura hæmorrhagica*.

<sup>4</sup> Ollivier d'Angers. Développement spontané d'ecchymoses cutanée avec œdème aigu sous-cutané et gastro-entérite. (Archives génér. de Med., t. xv. p. 206.)

<sup>5</sup> Reil (observations quædam de hæmorrhœa petechiali.—Memorial Clinic. fasc. v.), relates three remarkable cases of *purpura febrilis hæmorrhagica*.



1024. *Purpura sine febre* is more frequently complicated with *rupia* than with any other eruption. *Purpura febrilis* and the *hemorrhagic fever* occasionally appear in the course of several acute diseases, and particularly during *small-pox*.<sup>1</sup> *Purpura* may complicate *jaundice*<sup>2</sup> and *peritonitis* (Watson). I have seen it occur in the course of a fatal case of internal strangulation of the small intestines, and in several other diseases very different in their nature from *purpura*.

1025. *Anatomical observations*.—Cutaneous and subcutaneous ecchymoses and petechiæ, observed in *purpura*, neither increase nor decrease at the instant of dissolution. In dissecting the skin after death, the petechiæ and ecchymoses are found not to be all similarly situated. Some are very superficial and on the surface of the skin, others occupy the internal areolæ of the dermis, and the larger and deeper are seated in the subcutaneous cellular tissue. All these spots are formed by the effusion of blood which is coagulated in the largest and blackest, and fluid in the smaller ones. The vascular ramifications in the neighbourhood of the small effusions are not more developed than in their natural state; the blood is easily removed by the aid of washing or maceration.

The mucous membranes of the mouth, stomach, and intestines present in some point or other, petechiæ and ecchymoses similar to those of the skin. The exterior surface of the lungs generally presents a certain number of ecchymoses, which are rendered particularly distinct, as in the spaces between them; the colour of the lungs is natural. Beneath the ecchymoses, the tissue of these organs is of a reddish-brown colour, homogeneous texture, harder than the healthy part which surrounds it, and presents a small circumscribed infiltration from which black blood is easily forced out by pressure, a character altogether analogous to the hæmoptoe or apoplectic dispositions described by Laennec. The same description of ecchymosis is sometimes found between the mesenteric laminæ, under the peritoneum, pleura, pericardium, &c. Positive effusions of blood have been seen also into the membranes of the brain, and sanguineous infiltrations into the diploë of the broad bones, and into the medullary membranes of the long bones.<sup>3</sup> When patients have sunk after profuse or repeated hemorrhages, the heart only contains sanguineous serum without clots; the arteries and veins present no peculiar or regular alteration, and the same may be said with regard to the other organs, which may present accidental, but not characteristic lesions.

1026. Askow, having analyzed the blood of patients affected with *purpura*, affirms that it is in no way different from that of a healthy person; Johnston, however, has seen it remain fluid, not separating into serum and coagulum, although there was some appearance of coagulable lymph. In a case seen by Duncan, the blood, in flowing from the vein, had a most extraordinary appearance; he compares it to arterial blood mixed with water; it was half transparent, and of a bright red colour. The blood coagulated very slowly, and the coagulum was not very firm; the serum did not separate, and the coagulum had the appearance of a shaking jelly, through which the red globules, which had fallen to the bottom, could be perceived. The red colouring matter was in smaller proportion than in ordinary blood, probably from the frequent recurrence of the hemorrhage. There was no trace of coagulable lymph. At the commencement of *purpura hæmorrhagica*

between the muscular tissue and the pericardium, surrounded the heart, particularly the right ventricle; the organ was small in size. The mucous membrane of the larynx and trachea was of a livid red colour; the lungs were healthy and crepitating; the abdominal and thoracic aorta was ossified in parts along its whole extent. This artery contained a large fibrinous clot. The thoracic and abdominal vena cava contained no blood; a number of small lymphatic inflamed glands were perceived in the neighbourhood of the aorta; the sub-peritoneal cellular tissue and the epiploons were loaded with fat. The peritoneum was healthy; the mucous membrane of the stomach was covered with numerous blood-vessels; deep red-coloured spots were found on the duodenum; the rest of the intestines did not present any alteration. The urinary and biliary organs, and the spleen were healthy; the psoas and iliacus muscles were deeply ecchymosed, and loaded with black blood; the muscles of the body and of the face did not present any particular appearance; the articulations were healthy; the brain appeared loaded with transparent serum; the cerebral sinuses contained fibrinous concretions.

<sup>1</sup> Haller speaks of an epidemic small-pox in which the patients, at the moment the eruption appeared, experienced pains in the back, and hæmoptysis: petechiæ and ecchymoses appearing at the same time among the pustules. [Opuscul. Patholog., obs. 44.]

<sup>2</sup> Dr. Elliotson has related two cases of this complication; one was successfully treated with calomel in doses of 12 grains, and half an ounce of castor oil repeated for several days; the other terminated in death.

<sup>3</sup> Journ. complém. des sc. méd., t. xxxvi. p. 434.

*sine febre*, I have never been able to discover any thing in the blood that differed from the natural state; after repeated hemorrhage, it only became more serous. In *purpura febrilis*, I have several times seen the blood present a well-marked buffy coat.

1027. *Causes*.—The mode of formation of the ecchymoses and petechiæ in *purpura*, is still unknown. The vessels in which the blood circulates, having been found unaffected, and no obstacle to its flow being discoverable, it has been supposed that the transudation of the blood was owing to a change in its composition, to a greater tenuity of its molecules, &c. Others have supposed that the blood flowed from the dilated pores of the capillary arteries and veins, whose sensibility was increased or diminished, or the sides of which had given way, &c.

The disease, not of very frequent occurrence, attacks all ages; but more frequently appears before puberty. I have particularly noticed it in children of weakly constitution, ill fed, kept at sedentary occupations, inhabiting low and damp places, or in women of a nervous temperament, and of great mental susceptibility. *Purpura* sometimes occurs, without any appreciable cause, among the higher classes of society, and in persons apparently of the finest constitutions; it appears that it may be hereditary.<sup>4</sup>

1028. *Diagnosis*.—Ecchymoses produced by external violence, and certain extravasations of blood<sup>5</sup> into the subcutaneous and intermuscular cellular tissue of fractured limbs, the consolidation of which they either retard or prevent, must be distinguished from *purpura simplex*. Nor must this disease be confounded with the petechiæ or ecchymoses which sometimes appear on the lower limbs after standing for a considerable length of time, or in consequence of a mechanical obstacle to the return of the blood.<sup>6</sup>

*Purpura febrilis* and *hemorrhagic fever* may easily be distinguished from scorbutus, which is a chronic affection. *Purpura sine febre* cannot be confounded with scorbutus, when the hemorrhage occurs from any other passages than the mouth, if the gums are healthy, &c.; but it appears to me to be almost impossible to distinguish *chronic hemorrhagic purpura*, in which the blood flows from swelled gums, and the insides of the cheeks, from true scurvy. To be satisfied of this position, no more is required than to consult the account which Poupert and Thibaut have published of an epidemic scorbutus, which attacked great numbers of the patients in the Hôtel Dieu.<sup>7</sup> Still in scorbutus the gums are swelled, softened, and, as it were, putrefied; whereas, in *purpura*, they are simply the seat of true hemorrhage, and do not generally present any of these appearances.

The alteration of the gums is much more extensive in scorbutus, where it is most commonly preceded by swelling and inflammatory redness, as it is followed by the loosening and loss of the teeth.<sup>8</sup> Scorbutus has further been most frequently observed on ship-board, in prisons and in besieged fortresses.

In yellow fever, as in *purpura hæmorrhagica*, spontaneous hemorrhage, blackish bloody evacuations and vomiting, sanguineous infiltration into the muscles, into the cellular substance under the skin, into its substance, or over its surface, occur; but yellow fever differs from *purpura* in its cause, and the severity of its symptoms, of which profuse hemorrhage is never one of the most alarming.

<sup>4</sup> Davis's Edin. Med. and Surg. Journ., t. xxvi. p. 291.

<sup>5</sup> Cloquet (Jules). Du scorbut qui se manifeste d'une manière locale pendant le traitement des fractures. (Archiv. génér. de méd., t. i. p. 470.)

<sup>6</sup> Pringle having bled a person labouring under jail fever, petechiæ appeared, during the time of bleeding, on the forearm, below the ligature, and in no other part. (Vide Latour, op. cit. t. ii. p. 345.) I attended in 1829, at the Hôpital Saint Antoine, a man in whom, after death, the right iliac vein was found filled with fibrinous clots of recent formation. There had appeared during life, a serous infiltration of the whole of the right leg. This infiltration, which was very considerable, happened about thirty hours before death, and was accompanied after eighteen hours by a considerable development of petechiæ and ecchymoses which appeared only on the infiltrated parts.

<sup>7</sup> Poupert (Mémoires de l'Académie des Sciences de Paris, 1699).

<sup>8</sup> Escarbot has left us a description of an epidemic scorbutus with which Cartier's fleet was affected on a voyage of discovery to Canada in 1535. "Et à aucuns leur devenaient les jambes toutes sursies de gouttelettes de sang comme pourpre, puis montoit ladite maladie aux hanches, aux cuisses et espauls, aux bras et au col, et à tous venoit la bouche si infectée et pourrie par les gencives, que toute la chair en tomboit jusqu'à la racine des dents lesquelles tomboient presque toutes, et tellement sesprint ladite maladie à trois navires, qu'à la my-février, de cent dix hommes que nous estions, il n'y en avoit pas dix sains." Les navigations, etc., faites par les Français es-Indes Occidentales. Paris, 1618.



The same observation applies to small-pox, measles, scarlatina, typhus, severe hospital or jail fever,<sup>1</sup> and the plague, diseases all of which are sometimes accompanied with petechiæ and ecchymoses. But the morbid miasmata or poisons which produce these different diseases, give them peculiar characters and distinguishing features, which the mere community of a single serious phenomenon, that of hemorrhage, will not permit us to overlook or to misunderstand.

1029. *Prognosis*.—Purpura hæmorrhagica, which shows itself by ecchymoses on the skin, is, generally speaking, a more serious disease than that which appears by petechiæ, and this latter form is of a more dangerous nature than purpura simplex. Purpura febrilis and hæmorrhagic fever are generally less serious than those forms of hæmorrhagic purpura which commence without fever, but become febrile after hemorrhage has recurred several times. A small, hard, and very frequent pulse (from 130 to 140 a minute) is often a precursory sign of a renewal of the hemorrhage or of other serious symptoms.

Ecchymoses on the nose are often the forerunners of profuse hemorrhage from the nose or the nasal fossæ; palpitations or pulsations of the epigastrium are indicative of hæmatemesis; oppression about the chest, and cough often precede hæmoptysis.

1030. *Treatment*.—The treatment varies with the varieties, the forms, and the periods of this disease. Purpura simplex sine febre sometimes gets well spontaneously after lasting several weeks, when the petechial eruption is not very considerable. Antiscorbutic medicines—infusion of wild radish, antiscorbutic wine and syrup—are applicable in the greatest number of cases, and are beneficial above all to individuals of a pallid complexion and of weakly constitution.

Purpura hæmorrhagica sine febre should be treated by acidulated drinks, chalybeates, the decoction and extract of rhatania, sometimes by the acidulated decoction of cinchona, and often by lotions, cold ablution and aspersion, if the hemorrhage is very profuse, and if, as is usually the case, there is no indication that the loss of blood is necessary or supplementary to some other evacuation. At this period and under such circumstances, blood-letting is rarely advisable, unless the pulse be strong and full; hæmoptysis, hæmaturia, and bleeding from the uterus, sometimes render it necessary to have recourse to the detraction of blood; but when, after several attacks of hemorrhage, the primary symptoms remain or reappear, bleeding ceases to be applicable, even with a hard and frequent pulse. (a) In this case purgatives become very useful, and have been particularly recommended by Storck, Burserius, and a great many able practitioners. Some prefer cathartic vegetable, others mercurial purgatives.<sup>2</sup> Oil of turpentine<sup>3</sup> combined with calomel, with castor-oil or syrup of senna, has been mentioned as a good form of laxative; I generally make use of jalap combined with calomel. (b)

When purpura occurs where the individual is already affected with intermittent fever,<sup>4</sup> if the petechiæ and ecchymoses have appeared

(a) Dr. Elliotson and Dr. Latham give cases of successful results after blood-letting, followed by purgatives. Aware of the different states of the system associated with purpura, we should have recourse to treatment correspondingly various. As a general rule, neither venesection nor the early use of tonics is advisable. Purgatives, mild salines, with the other parts of an antiphlogistic regimen, are preferable.

(b) Acetate of lead and opium, and sulphate of quinine and calomel (Dr. Wright—*N. Y. Med. & Surg. Jour.*, vol. i., p. 456), have been found to succeed in some cases.

<sup>1</sup> Latour says, that a great number of deserters died at the Hospital of Orleans in 1806 and 1807, of a violent fever, sinking in some cases whilst vomiting quantities of blackish and fetid blood, in others in consequence of a nasal or intestinal hemorrhage so profuse that it only ceased with death. Several of these patients were covered with black and violet-coloured petechiæ; others had the whole surface of the nose only as black as charcoal.

<sup>2</sup> Harty (W.). On the efficacy of mercurial purgatives in purpura. *Edinb. Med. and Surg. Journ.*, vol. xxiv. p. 57.

<sup>3</sup> Whitlock Nichol. Obs. on the treatment of purpura hæmorrhagica. *Edinb. Med. and Surg. Journ.*, vol. xviii. p. 540. Magee, Jos., (case of purpura hæmorrhagica successfully treated with spirit of turpentine, *Edinb. Med. and Surg. Journ.*, vol. xxiv. 1825, p. 307,) appears to me to have used both scammony and turpentine in too large doses.

<sup>4</sup> I had a man twenty-seven years of age under my charge in 1829, at the Hôpital de la Charité, who had been long ill with quartan ague, and for the last six weeks had been passing blood in his stools, without pain, upon whose belly and lower limbs petechiæ had appeared at the same time. The fever quickly yielded to the adminis-

during the attack, sulphate of quinia, by preventing the return of the fit, often renders all other remedies unnecessary.

If purpura occurs after privations of all kinds, more generous and wholesome food, composed of rich soups, boiled and roast meats, wine, jellies, and good wine mixed with water for drink, contribute materially to the cure.

1031. Each variety of hemorrhage which occurs in purpura, further requires a different mode of treatment.

1st. Ecchymoses and petechiæ should be treated by stimulating spirituous lotions or lotions of the chloride of lime. The limbs may also be wrapped in rollers dipped in cold vinegar and water.

2dly. In cases of frequent or very profuse epistaxis, cold lotions applied to the head and between the shoulders, astringent lotions, mustard foot-baths, and above all, plugging the nostrils, should be made use of.

3dly. Dry cupping in different parts of the body has often proved very serviceable in hæmoptysis.

4thly. Lotions and styptic injections, ice, and cold applications to the epigastrium, are useful in uterine hemorrhages.

5thly. Cold water strongly acidulated with vinegar, injections of a strong acidulated decoction of gall-nuts, ice enclosed in a bladder and applied to the belly, should be made use of in intestinal hemorrhages.

6thly. Hemorrhages which take place from the surface of issues, blisters and ulcers, may be arrested by compression and styptic lotions; and, finally, other hemorrhages are to be treated by similar means, and according to the general principles that are applicable under other circumstances.

1032. The antiphlogistic treatment generally,—low diet, &c., is usually applicable in purpura febrilis and hæmorrhagic fever. The temperature of the body and of the outward air should be kept very moderate. Cold water, whey, and slightly acidulated mucilaginous drinks are the best means we possess for reducing fever; if the first febrile symptoms are of a serious nature, if the hemorrhages which have taken place have not been very profuse, and, as a still stronger reason, if the pulse be strong and full, bleeding should be had recourse to once and again, should it appear to be indicated.<sup>5</sup> Bleeding from the foot is particularly recommended in epistaxis, and bleeding from the arm in hæmoptysis, hæmatemesis, metrorrhœa, &c. When purpura has been preceded by amenorrhœa or dysmenorrhœa, the application of leeches to the genital organs is preferable to bleeding from a vein. Immediately after bleeding, purgatives are extremely useful; a bolus of rhubarb and calomel, and of jalap and calomel, with whey for drink, may be prescribed immediately, and followed up by the use of injections of oil of turpentine.<sup>6</sup> The symptoms have sometimes been known to disappear after salivation, and hypercatharsis occasioned by large doses of calomel. To conclude, bleeding and purgatives are the principal remedies in purpura febrilis and hæmorrhagic fever.

1033. Ecchymoses occurring in the aged, require nothing more than simple local measures, the use of spirituous and tonic lotions, &c. Petechiæ and ecchymoses occurring in persons of cachectic constitutions are the results and indications of serious and deeply-seated diseases towards which the whole attention of the practitioner should be directed.

#### Historical Notices and particular Cases.

1034. Hippocrates<sup>7</sup> describes a species of disease of the spleen with fetid odour of the mouth, swelling of the gums, and large bleeding ulcers of legs, which seems rather to be scurvy than purpura. Celsus<sup>8</sup> repeats this passage almost literally and makes further mention of hemorrhages of the nose and other parts. The ancients speak of universal hemorrhages, not only proceeding from all the principal orifices

tration of sulphate of quinine, when the petechiæ disappeared and did not return. I have quoted, after Stoll, in the first edition of this work, a case of purpura complicated with intermittent fever, which terminated in death. *Stoll. Ratio medendi. Pars prima*, p. 110, 8vo. Parisii, 1787.

<sup>5</sup> Parry. On the utility of venesection in purpura. *Edinb. Med. and Surg. Journ.*, vol. vi. p. 7.

<sup>6</sup> Belcher. *Revue médic.*, 1825, t. ii. p. 461.

<sup>7</sup> *De intern. affectionibus. Sect. v. p. 558.*

<sup>8</sup> Celsus. *De re medicâ*, lib. ii. sect. 7, p. 52.



of the body, but even through all the pores of the skin, and which they attribute to the bite of the serpent *hæmorrhoids*.<sup>1</sup>

Rivière or Riverius<sup>2</sup> had distinguished purpura from the petechiæ which are observed in malignant fevers, long before Werholf<sup>3</sup> devoted some lines to the description of this disease in the celebrated Nuremberg collection. Graff<sup>4</sup> published, in 1775, the first inaugural dissertation on this affection, the history of which has since been rendered more complete by the researches of Behrens,<sup>5</sup> Car. Strack,<sup>6</sup> Adair,<sup>7</sup> Berenger,<sup>8</sup> J. G. Acrel,<sup>9</sup> Osthoff,<sup>10</sup> Havinga,<sup>11</sup> Willan,<sup>12</sup> Bateman,<sup>13</sup> Pickel,<sup>14</sup> Groeser,<sup>15</sup> Gauthier-Bellefonds,<sup>16</sup> Pierquin,<sup>17</sup> Brachet,<sup>18</sup> Fourneaux,<sup>19</sup> A. Keller,<sup>20</sup> Conradi,<sup>21</sup> and several others.

CASE CXLIX.—*Purpura hæmorrhagica; nasal hæmorrhage, numerous spots upon the skin; death; petechiæ in the cerebral substance, on the heart, and lungs; collection of blood in the substance of the liver.*—Joseph Roullier, thirty-two years of age, a porter, had been extremely subject to attacks of epistaxis for two years. About three months ago he had been admitted into the hospital Cochin. At that time he was very much debilitated by a copious bleeding from the nose which had continued for a fortnight; he had, moreover, small red spots upon the skin. At the end of a fortnight the bleeding at the nose had ceased, and the patient being better, he was discharged on the breaking out of the epidemic cholera; he remained about a fortnight after leaving the hospital without any fresh attack of hæmorrhage; subsequently to that period, however, he rarely passed four days without one; he did not the less continue at his work, although his strength diminished daily. The pituitary membrane still continued the only part towards which the hæmorrhagic effort was directed; the patient had never had hæmoptysis, nor had he ever voided blood in his stools. He presented himself for admission at the hôpital de la Charité on the 26th October, 1833. For eight days previously he had been continually losing blood, and his debilitated state had obliged him to give up work. The following is the state which he presented the day after his admission:—Considerable paleness of the face; the nasal cavities continue to discharge drops of blood, excessively liquid and serous, and slightly inclined to a pink colour. The hæmorrhage is, however, rather diminished since yesterday, compresses steeped in vinegar having been applied to the face since the patient's admission into the hospital. The tongue and lips are pale; the gums, perfectly healthy and firm, as in the normal state, are blanched; the appetite is pretty good; the patient asks for food; there is no nausea; the stomach is perfectly healthy. The alvine evacuations are natural, occur regularly, and present no appearance of blood. The chest, after careful examination, is found to be in the most normal state. The pulse is quick, giving a hundred pulsations in a minute. The chest, neck, arms, and legs, are covered with a multitude of deep red spots, scattered here and there in an irregular manner. These spots, which are regularly rounded, are for the most part a line in diameter; on some

points they are isolated, in others they are united by twos and threes, and in several places are more closely connected, being clustered in large numbers, so as to form patches of various dimensions, which at first sight resemble ecchymoses. The greater number of these spots are of a deep red, others present a paler russet colour, and others have a slightly yellowish tinge like an ecchymosis that has almost entirely disappeared. On examining attentively such of these spots as are thus in process of resolution, it is easy to perceive that they fade from the centre towards the circumference, as they leave at length a thin marginal ring. The arms and thighs exhibit only a few detached spots, scattered here and there. The chest and abdomen, on the contrary, present a much greater number; the spots, indeed, are confluent over these two regions, and in some places form continuous patches of ecchymosis. (Decoction of bark with acid; half a drachm of extract of rhatany in pills.)

28th. The nasal hæmorrhage diminished; the general condition the same as yesterday; the intellect of the patient is observed to be slightly affected.

29th. Fresh epistaxis, which is very copious: the blood flowing from the nasal cavities is very serous; face extremely pale, pulse very weak; vomiting in the morning, the patient drowsy; the spots upon the skin neither larger nor more numerous than on the preceding day; (*acidulated decoction of bark, as before; draught, with decoction of rhatany, and eighteen grains of alum; a lump of ice to melt in the mouth; compresses dipped in vinegar to the face; sinapisms to the feet.*)

30th. Extreme paleness; continued hæmorrhage, but less copious; drowsiness; the patient talks incoherently on being waked from sleep, and exhibits a considerable degree of excitement; pulse very weak. The spots had faded considerably; on the arms and thighs they have disappeared; but are still to be found on the breast and belly, though paler than before. These spots still continue to fade from the centre to the circumference, thus forming little rings, which become effaced gradually. (*Acidulated decoction of bark; four ounces of Malaga wine; draught, with a decoction of rhatany, and eighteen grains of alum; compresses dipped in vinegar and water.*) On the following days, nothing occurred worthy of remark; the bowels began to act; the patient was less depressed.

3d of November.—The old spots have almost entirely disappeared, and no fresh ones have been thrown out; the face still rather pale; the patient feels much better; the pulse is stronger than on the preceding days; it is easy to trace in the spots which yet remain, all the various shades of colour through which they pass before they disappear. (*Acidulated decoction of bark and Malaga wine, &c., as before; quarter diet.*)

5th. Fresh nasal hæmorrhage, but not copious; the face pale; the pulse weak and quick; the skin does not, however, exhibit any new spots; and it is with difficulty that a few small discoloured rings, the remains of the brown spots which the skin formerly presented, can still be perceived; the chest and digestive organs do not appear to be affected; the patient talks much, but does not seem anxious about his situation; (*mucilaginous draught, with sixty drops of the essential oil of turpentine; mucilaginous lemonade; mustard bath to the feet; compresses, wrung out of vinegar and water, to the nose and forehead.*) Nothing new on the following days; the hæmorrhage stopped completely; the patient is still pale and weak; he attempted to rise, but felt giddy, and nearly fainted.

9th of November.—The spots on the skin have completely disappeared. The patient has expectorated several times; the mucus, which appears to come from the posterior nares, is slightly tinged with blood, but there is no actual hæmorrhage. The dose of turpentine is increased to a drachm; the patient has half diet, which he eats.

10th. Fresh nasal hæmorrhage.

11th. The hæmorrhage continues; the blood is very liquid and pink-coloured. The patient is extremely pale and feeble; the pulse weak and quick; tongue white; no derangement of the digestive organs, nor of the chest; the patient is drowsy, retains all his faculties; in other respects there is nothing remarkable. With regard to the skin, the old spots have completely disappeared, and no new ones have shown themselves. (*Acidulated decoction of bark; wine and water for drink; four ounces of Malaga wine; sinapisms; compresses wrung out of vinegar and water.*)

<sup>1</sup> Lucan has drawn an appalling picture of these symptoms. (Pharsal, lib. ix. v. 810.) Several naturalists have doubted the existence of the hæmorrhoids.

<sup>2</sup> "Et interdum erumpere soleant (maculæ purpureæ) in mulieribus mensium suppressionem patientibus, et in nonnullis pueris ob luem quandam sanguinis ebullitionem, nullâ tamen apparente febre, quod nobis in utrisque non raro videre licuit." Lazari Riverii Præceps medicæ, 12mo. Lugd., 1674, t. ii. p. 630. Cent., obs. to 21.

<sup>3</sup> Werholf. Commer. Norimb. ad rei Medic. et Scient. Natural. incrementum Institut., 1745.

<sup>4</sup> Graff (Eberh. Gott.). Diss. de petech. sine febre, 4to. Gotting., 1775.

<sup>5</sup> Behrens. Diss. Epist. de morbo maculoso hæmorrhagico, etc. Recus. in Werlhofii. Op. Coll. a Wichmann, p. 615.

<sup>6</sup> Strack (Car.). Obs. med. de morbo cum petechiis. Carolinuhæ, 1766.

<sup>7</sup> Adair (J. B. in.). Diss. med. de hæmorrhœa petechiali. Edinb., 1789.

<sup>8</sup> Berenger (J. G.). Diss. de hæmorrhœa petechiali. Halæ, 1792.

<sup>9</sup> Acrel (J. G.). Diss. de hæmorrhœa. Resp. Ca. Zetterstroem. Upsal, 1797.

<sup>10</sup> Osthoff. Diss. de morbo maculoso. Duisburg, 1798.

<sup>11</sup> Havinga. Diss. de morbo maculoso Werlhofii, 4to. Groning., 1799.

<sup>12</sup> Willan (R.). Reports on the diseases in London, 1801.

<sup>13</sup> Bateman. Diss. de hæmorrh. petechiali, 8vo. Edinb., 1801.

<sup>14</sup> Pickel. Diss. de morbo maculoso. Wirceburg, 1802.

<sup>15</sup> J. Groeser. Diss. de morbo maculoso hæmorrhagico. Heidelberg, 1803.

<sup>16</sup> Gauthier-Bellefonds. Dissert. sur la maladie tachetée de Werlhof. Strasbourg, 1811.

<sup>17</sup> Pierquin (V.). Recherches sur l'hémacélinose, 4to. Montpellier, 1821.

<sup>18</sup> Brachet. Mém. sur la maladie tachetée de Werlhof. (Revue méd., t. vii. p. 83. Paris, 1822.)

<sup>19</sup> Fourneaux. Obs. sur quelques hémorrhagies cutanées et sous-cutanées, etc., 4to. Paris, 1826.

<sup>20</sup> Keller. Abhandl. über die Blutfleckenkrankheit. Würzburg, 1826.

<sup>21</sup> Diss. de morbo maculoso hæmorrhagico Werlhofii. Gottingæ, 1829.



12th. The debility is extreme; the nasal cavities continue to discharge a small quantity of blood of a very pale colour, which does not coagulate, and is entirely serous; the face, lips, and tongue, are blanched; the patient complains of his chest; the respiration is embarrassed; with the stethoscope, the respiratory murmur can be heard, but it is feeble and indistinct; the chest generally sounds satisfactorily; the pulse is very weak and quick. (*Acidulated decoction of bark; wine and water, &c.*, as before.) The bleeding from the nose continued very slowly; the patient became gradually weaker and weaker; and after sinking into a tranquil kind of delirium, he died in the course of the day.

*Secio cadaveris thirty hours after death.*—There is nothing remarkable in the external appearance. *Head.*—The arachnoid membrane is rather thickened; the sub-arachnoid cellular tissue is infiltrated with serum. The cortical substance of the brain is pale, and very moist; in one point of the anterior convolutions, there is a small bloody effusion, of the size of a large pin's head. The white substance presents a great number of petechiæ, disposed in patches here and there. These red points are surrounded by a small gray circle; in another point there is a second effusion, of the size of a common pea. *Chest.*—The right lung is affected with a kind of ecchymosis towards its base; the pleura which covers it presents numerous petechiæ. The pulmonary tissue is highly œdematous; on being incised, numerous points of sanguineous suffusion appear on the surface of the cut. Towards the posterior parts of the lower lobe, there is a point where the pulmonary tissue, apparently indurated, is infiltrated with blood. The left lung does not present any petechiæ on its external surface; it is not very crepitating, but loaded with fluid, and also presents a great many extravasated points of blood. The heart is of the ordinary size; numerous petechiæ appear on the anterior surface of the right ventricle; on the left ventricle they are rare; the posterior aspect of the auricle is very thickly beset; the cavities of the heart contain a very small quantity of fluid blood; the aorta also contains a small quantity of blood, which is excessively pale and serous, and a fibrous clot of small size, entirely colourless. *Abdomen.*—The stomach is softened about the great *cul-de-sac*. Its mucous membrane presents a great number of small reddish points, resembling petechiæ. The remainder of the alimentary canal does not offer any thing remarkable. Towards the extremity of the small intestines, a very decided follicular eruption is perceived, precisely analogous to that which is met with in cholera, although our patient had presented no symptom of the kind, not having even had liquid stools towards the close of his life. The liver presents internally a circumscribed collection of blood, a sort of apoplectic cell, the size of a small hazelnut; throughout the remainder of its extent, the substance of the liver is pale and bloodless. The spleen presents externally a great number of small pink spots. The other organs contained in the abdomen have nothing remarkable in their appearance. (a)

(a) "*Purpura hemorrhagica* in an infant three weeks old. Dr. Post gives (*N. Y. Jour. of Med. & Surg.*, vol. i, p. 222), the following description of a *post-mortem* examination of this case:

"On the 25th Feb. 1839, I was invited by Dr. B. B. Coit, to examine the body of an infant three weeks old. There had been hemorrhage during the first and second days of its life, from the sides of the umbilical cord, which had been checked by the application of powdered galls, and by pressure. It had then exhibited purple spots, apparently formed by the extravasation of blood, beneath the skin in different parts of the body; these spots were an inch or more in diameter. The evacuations from the bowels continued for eight or ten days of a black colour, and of a tar-like consistence. Small doses of calomel were then administered, and the evacuations began to assume a healthy appearance. The ecchymosed spots then began to fade away, and no new ones made their appearance. But about the 10th day, a fluctuating tumour began to form about the posterior part of the occipital ridge, which continued to increase during a period of ten days, when it had acquired about the size of a hen's egg, and was very tense, and seemed to cause much irritation. The tumour was opened with a lancet, and black fluid blood flowed from it. On the following day, the child died.

"The following appearances were found on examination: body

CASE CL.—*Purpura hemorrhagica preceding small-pox.*—F. C. Sorel, three years and nine months old, admitted into the *Hospice*

not emaciated; surface extremely pale; ecchymosed spots in several places beneath the skin, scarcely perceptible on its external surface, but very distinct on the internal surface; there was a fluid tumour at the posterior part of the occipital ridge, containing a soft coagulum of blood; this sac was found beneath the periosteum and the bone; small quantities of bloody fluid were found beneath the arachnoid membrane on the surface of the pia mater; bloody serum and small quantities of coagulated blood in the ventricles of the brain; cineritious substance of the brain of a pure white colour, so that I could not, in any situation in which I examined it by broad day-light, distinguish it from the medullary substance; lungs remarkably pale; cavities of heart empty; stomach and intestines very pale and distended with gas; liver of about the usual size and consistence, but of a yellowish-brown colour, without any shade of red."

"*Purpura subsequent to eczema mercuriale.*—Mr. Adams said that with the permission of the Society he would communicate a case of purpura which had occurred in the Jervis Street Hospital, where the notes of it had been taken by the late Dr. Coulter. The appearances, at different periods of the progress of the case, were accurately delineated, in the four drawings on the table. The subject of the case had been affected with syphilis six weeks before his admission into the hospital, and had used mercury pretty freely; he became affected with eczema mercuriale. After the tenth rubbing in of the mercurial ointment, small, very minute vesicles appeared. Some of these dried up; others discharged a fluid which excoriated the parts about the scrotum, a circumstance formerly observed by Pearson, and described in his work: dyspnoea and cough supervened. On the seventh or eighth day after his admission into the hospital, the dyspnoea became more oppressive; there were rigors, and afterwards bleeding from the gums, and from the fissures about the serotum: during several subsequent days, ecchymoses appeared on different parts of the body, and in all these there was a great disposition to slough: there were ecchymosed spots on the lips, which rapidly sloughed: about the sacrum, in the same manner, sloughs formed, and from the sloughs there were bleedings: he died on the 16th day. The body was carefully examined after death: there were no hemorrhagic petechiæ within the cranium, nor on the surface of the heart; the lungs, anteriorly, were very anæmic and white—posteriorly they were congested; the mucous coat of the stomach and intestinal canal was ecchymosed.

"Mr. Adams considered that purpura was rather a symptom of peculiar debility than a disease itself. In proof of this, he mentioned a case of pemphigus gangrenosus, in which purpuric spots appeared on the skin, and in a case of cancrum oris they had been observed towards the close of the disease. It was well known that they appeared in scarlatina maligna, in plague, and in some other diseases. Indeed, purpura corresponded very much to the descriptions which authors give of the land scurvy."—*Proceedings of Path. Society of Dublin, in Dublin Journ. of Med. Science*, vol. xxiv.

*Purpura hemorrhagica—fatal.*—William Hunt, æt. 45, admitted into the Westminster Hospital, January 13th, under Dr. Bright. On the elbows, down the course of the spine, inside of the thighs, and generally over the legs, the purple *maculæ* are dispersed: in some places the patches are so large as to seem like the result of bruises. The colour is most decided in the centre of each spot, and gradually fades towards the margin. The pulse is 84, feeble; tongue clean; bowels torpid, motions clay-coloured; urine scanty and high-coloured, depositing a sediment like carmine. The man has a sallow complexion; the white of the eye is tinted gamboge. There is no tenderness in the hypochondrium. The abdomen is tense over fluid. The legs are œdematous.

"Hunt is an old soldier; he served in Spain and at Walcheren. At this last place he had the well-known epidemic. Being an habitual drunkard, he was exposed, about six weeks before admission into this hospital, to cold, whilst in a state of inebriation. When he came to himself, he had pain in the right hypochondrium and throughout the muscles of the body; these symptoms gradually evanescenced, and were succeeded by dropsy of the belly and legs. Contemporaneously



*des Enfants Maladies* on the 19th of August, 1825, had enjoyed perfect health till within two months of the above date, when measles made its appearance, without, however, presenting any thing unfavourable in its character. During the last fortnight, the patient has had a slight cough, and the skin has been burning; but she has made no complaint, although evidently dull and listless; for six days she has experienced great difficulty of breathing; in the evening of the 9th and following day, she complained of pain in the epigastrium (*four leeches applied*); on the 11th the difficulty of breathing increased (*blood taken from the arm; gum water*); no improvement; the 12th, an eruption of purple spots over the whole body, which still continue

an attack of hæmoptysis occurred. About a week before he showed himself at the hospital, the petechiæ just described made their appearance. Ordered the following medicines:—

R. Ext. Coloc. Comp. gr. x., hâc nocte et pro re nata sumend.

R. Pulv. Rhæi, gr. iij; Pulv. Cinchonæ ʒj. M. fiat pulv. ter die sumendus.

Decoct. Cinchonæ et Acid. Nitric. 6tis horis.

"January 14th.—The abdomen is still tense; water not increased; bowels confined.

Rep. Pulv.

"15th.—The petechiæ unaltered; copious rosaceous deposit falls from the urine; anasarca swelling of the legs diminished.

"16th.—Fresh petechiæ have appeared on the calves of the legs. The older petechiæ are of a paler colour; the œdema has diminished; abdomen still tense; urine of a dark madder colour, depositing the purpura of ammonia. During the day considerable hemorrhage took place from the lungs. *Calomel and squill pills* to be taken daily, and cream of tartar solution to be drunk *ad libitum*.

"17th.—The purple spots have diminished as regards intensity of colour. Epistaxis took place to some extent this morning. The bowels torpid. To take a dose of spirit of turpentine, qualified with oil of peppermint.

"18th.—Complains of some pain in the left side, increased on coughing. The purpura has appeared in some fresh places. The bowels are freely open.

"20th.—Bowels again torpid, the maculæ spreading generally over the back. Urine increased in quantity, but of the same madder-like colour, and still depositing the purpura.

"23d.—The patient much harassed by cough. The sputa consist of mucus, floating in a greenish fluid. The yellowness of the eye has remained undiminished. The urine has increased to *three* pints daily. To be purged with jalap and calomel.

"24th.—Abdomen less tense. The maculation diminishing in colour and extent; urine clearer and more lightly coloured.

"25th.—This morning about nine o'clock sudden hemorrhage from the mouth occurred. It proceeded apparently both from stomach and lungs. The blood was of a bright vermilion hue, and streaked with dark lines. The face of the patient is contracted. Pulse very weak. Laudanum and dilute mineral acid is administered in proper doses.

"10 A. M.—The hemorrhage returned in ten minutes after the exhibition of the draught, to the extent of nearly a quart. No pulse was perceptible at the wrist. A glass of wine given. The hemorrhage remained uncontrolled, and the patient died at half-past ten o'clock.

"*Sectio cadaveris thirty-six hours after death.*—The entire body was dotted with petechiæ, and all the surface was of a yellowish tint; the lungs were slightly œdematous, but in other respects healthy. The mucous surface of the stomach, and small intestines throughout, covered with blood; this membrane, when sponged, was of a red colour, and infiltrated with blood. The liver was granular, and adherent by membranous bands to the adjacent viscera. The gall-bladder distended with bile; the cystic duct thickened, and almost impervious. The contents of the gall-bladder consisted apparently of blood mixed with cystic bile of a sweet mawkish taste; staining red rather than yellow. The surface of the gall-bladder was ecchymosed; all the other viscera were sound, except the muscoli recti abdominis, which were completely infiltrated with blood."

to-day, the 14th; the variolous eruption was not remarked till the 13th. The following is a description of the patient's state at the time of her admission: The variolous pustules, in inconsiderable numbers, are small, blanched, shriveled, and centrally depressed. On the surface of the skin, and particularly on the forehead, upper eyelids, back, and posterior aspect of the limbs, a number of spots are observed, irregularly scattered, rounded, and well defined, but not prominent; some, of a bright purple colour, are about the size of a lentil; others, of larger size, are of a deep violet hue. The lips and nostrils are covered with a dark sanguinolent incrustation. It is impossible to examine the inside of the mouth, so as to ascertain the state of the gums. The orifice made in the vein of the arm, three days ago, is still open, and discharged a little very serous blood this morning. The pulse is very languid; the extremities cold. The child retains its consciousness, notwithstanding the extreme depression; (*sinapisms*.) Death at three o'clock in the afternoon. *Sectio cadaveris* at eleven o'clock on the morning of the 15th. *External appearance.* Cadaverous stiffness of the inferior members; none of the superior. The colour of the skin, and of the spots, is precisely the same as during life. On incising the skin, it is easy to perceive that all the spots do not penetrate to the same depth; some are very superficial, and situated directly under the epidermis; others occupy the areolæ of the corion; finally, there are some (and these are the largest and deepest), whose seat is entirely in the subcutaneous cellular membrane. All these spots are formed by extravasations of blood, coagulated in the larger and darker kind, and liquid in those of smaller size. Examined with the assistance of a powerful glass, the vascular ramifications in the neighbourhood of these ecchymoses and petechiæ, are not observed to be more developed than in the ordinary state. If, after laying bare one of these effusions, a stream of water is directed upon it, the blood is soon washed away. A piece of skin, put into water to macerate, did not present any appearance of spots on the following day. There are no ecchymoses in the deeper strata of the cellular membrane generally; the right arm, however, where the puncture made in a recent venesection, still continues open, is the seat of an universal sanguineous infiltration, to which its tumefaction and livid appearance are owing. The veins and arteries of this extremity, traced into their most minute ramifications, do not present any visible alteration; the median cephalic vein, on which the operation of bleeding was performed, does not even exhibit any redness on the edges of the orifice; its walls are thin and transparent, and its external membrane is smooth and grayish, as in the healthy state. There is no ecchymosis into the substance of the scalp. Limpid serum, in small quantity, appears on the surface of the cerebral hemispheres; the subarachnoid vessels are empty; the cortical substance is pale; the medullary substance firm; the superior longitudinal sinus empty; the sinuses of the base of the cranium are filled with a liquid vermilion-coloured blood; traces still remain of a slight sanguinolent effusion, converted into dark incrustations, upon the lips and nostrils. The tongue and gums are pale and blanched; the palate is violet-coloured; the epiglottis swelled, as well as the edges of the glottis; the latter are covered with a very thin false membrane; the tracheal and bronchial mucous membranes are apparently healthy. The external surface of the lungs presents a great number of bright red circumscribed points, and several ecchymoses of a deeper colour; one of these, on the summit of the left lobe, is four lines in diameter; there are three smaller ones on the lower part of the same lobe, which also presents another, much more extensive, at its base. These spots are the more striking, on account of the lungs retaining their natural grayish colour. On examining the spots, they are found to correspond to a kind of dense circumscribed nucleus, which, on being cut across, presents a reddish-brown, homogeneous, granular tissue, in which the blood appears as if combined with the proper substance of the lungs. The parenchyma of both lungs contains several formations of the same kind, circumscribed in like manner, and situated in the midst of a perfectly crepitating tissue, from which, when incised, a quantity of blood, mixed with serum, escapes. Several of the glandular bodies of the bifurcation of the bronchi are red and enlarged. The pulmonary artery at its origin, and the right ventricle and right auricle of the heart, present three lenticular ecchymoses of a bright red, approaching to the natural colour of these parts, and another violet-



coloured one, nearly of the size of a sixpence, with irregular edges, situated on the posterior aspect of the apex of the heart. These effusions are situated entirely in the subserous membrane, and do not extend to the muscular tissue of the heart. A sanguineous suffusion, two inches in breadth, exists under the pericardium on the right side. The substance and cavities of the heart as in the healthy state; the internal membrane of the aorta and pulmonary vessels perfectly healthy. The stomach appears contracted; its mucous membrane very much wrinkled, particularly in the direction of the great curve, and beset with numbers of small red points, of a vermilion tint, like the pricks of a pin. Within three inches of the pylorus, there is a lenticular soft-ened spot, of a dark-yellow colour, limited to the thickness of the mucous membrane, under which there is a small ecchymosis of the same size; the duodenum presents, for the space of an inch, from the pylorus, a number of small petechial spots, closely set together like those of the skin; they are far fewer in number towards the lower portion of this division of the intestines. The mucous membrane of the small intestines is of the natural dirty gray colour; the glands of Peyer are slightly developed; the ileum contains green, flaky, muco-bilious matter. From the ileo-cæcal valve, the great intestines present a general violet red colour, which increases in intensity towards the sigmoid flexure of the colon; they are covered by an infinite number of red points; some, which are white in the middle, appear to be follicles; others are very small ecchymoses, which, towards the commencement of the colon, follow the circular folds of that intestine; in this situation they are covered with a grayish secretion, and are much less numerous than in the transverse and descending colon. Numerous trichocephala in the cæcum and its vermiform appendix, which is rather red; the fecal matter contained in the large intestines firmly moulded; mesenteric glands, of small size, intensely red, brownish in their centres. Some purple marblings are observed on the liver, but no spots; spleen small and healthy; kidneys pale; bladder contracted and healthy.

CASE CLI.—*Pulmonary tubercles, chronic pneumonia and peritonitis; purpura characterized by epistaxis, subcutaneous, submucous, subpleural effusions of blood, &c.* Ferd. Hélène, seven years of age, of a very feeble constitution, was admitted into the "*Hôpital des Enfants*," on the 14th of March, 1825. He had been a long time ill, was subject to diarrhœa and colic, and the belly was distended and painful. For the last four or five days the cough had increased, the fever was higher, and the thirst more intense. At the time of entering the hospital, this patient was labouring under chronic pneumonia and peritonitis. In spite of the active measures immediately employed, the patient continued to suffer from frequent cough, constant diarrhœa, and intense fever.

After being about twenty or twenty-five days in the hospital, the respiration became very laborious and short; the respiratory murmur was scarcely to be heard on the left side, and posteriorly to the right it could not be perceived at all. A blister applied a few days previously to the right side of the chest, became gangrenous, and was surrounded by crissipelatus inflammation of the most vivid red. At the same time a number of small violet-coloured circumscribed spots, were remarked on the upper and lower extremities, some circular, others oblong, and about a line, or something less in diameter. The patient had had several attacks of epistaxis; his pulse was very weak, the extremities were cold; (*mucilaginous decoction of bark; lavement of the same.*) The patient died in the course of the day. *Sectio cadaveris.*—Externally, a number of dark purple spots were observed on both forearms, some the size of flea-bites, others of grains of millet. There were also several on the legs and thighs, but these were much less dark in colour, and smaller in size. On cutting into, and dissecting off the skin of the forearms, hands, thighs and legs, we perceived that the subcutaneous cellular membrane was much injected, and very red, and presented a number of small sanguineous effusions, corresponding to the spots upon the skin, though none of these small ecchymoses were seated in the tissue of that membrane. The lymphatic glands of the armpit were injected and swelled. The subcutaneous veins of the extremities were pale and void of blood; externally they were white; the muscles were healthy. *Respiratory organs.*—Larynx, trachea and bronchi in a healthy state; inter-bronchial ganglions tubercular, softened in the centre, and very voluminous; agglomeration

of tubercular ganglions in front of the trachea. *Right lung.*—Upper lobe healthy, crepitating, spotted internally by an infinite number of small ecchymoses; middle lobe hepatized, and filled with pus, which flows out when the part is compressed; several hepatized points in the inferior lobe; two cavities in its centre, of the size of a hazelnut, containing yellow pus. *Left lung.*—Superior and inferior lobes crepitating, but filled with a much greater number of ecchymoses than the right lung. On several points the surface of both lungs presents spots analogous to those observed upon the skin; subpleural ecchymoses. Some miliary tubercles were found in the lungs. *Digestive organs.*—The mucous membrane of the mouth is pale. Several small submucous (similar to the subcutaneous) ecchymoses are remarked at the root of the tongue. Pharynx and œsophagus healthy; stomach healthy. The mucous membrane of the large and small intestines presents a few spots not much injected. The liver and spleen are healthy. The peritoneum is thickened at all points, and its folds adhere together. A number of small whitish tubercles, some of which are soft, occur at intervals between the layers of the epiploa. The great epiploon adheres throughout its whole extent to the abdominal parietes; all the intestines are agglutinated, and it is very difficult to separate them. The mesenteric glands are swelled and purple-coloured. *Urinary organs,* healthy. *Nervous system.*—The membranes of the brain are in a healthy state, the cerebral substance is of the natural consistence; there is very little serum in the ventricles; the cerebellum is perfectly healthy.

CASE CLII.—*Inflammation of the mouth; amygdalæ with pseudo-membranous deposits. Purpura hæmorrhagica.* A pale and delicate girl had been in bad health for a long time; she was in a very feeble condition, when red, livid spots made their appearance on her body; the amygdalæ at the same time became covered with dark spots, and a species of false membrane, of a black colour, and rather pulpy consistence. This young person had hemorrhage also from the mouth and nose. The dark hue of the amygdalæ gave reason to suspect her of being affected with gangrenous angina; the left tonsil was scarified, and the right touched with hydrochloric acid and water in equal proportions. The abdomen was not painful; the respiration was unaffected. On the evening of the 23d July, 1829, the skin was hot, burning, dry; the pulse quick and weak; the face swelled, particularly in the lower part, and the region under the jaw. This swelling was owing rather to a sort of œdematous puffing than to inflammation; the skin was straw-coloured; lymphatic glands could be felt under the swollen angles of the jaw, more to the right than the left. The lips were swelled, thick, and glossy, particularly the lower one, the mucous membrane of which, from its origin to the gums, was black and swelled. In the same situation a salient spot of the size of half a crown was observed, the centre of which was of a darker colour than the circumference. This prominent spot was formed by a kind of false membrane which could be removed with forceps without causing pain, excepting at the middle of the patch. This false membrane, of a grayish or dirty white colour, extended over the gums, diminishing in thickness, and less and less adherent to the parts beneath: it was easily removed piece-meal. On each side of the mouth, a dark, irregular skinny substance was observed attached to the gums by one extremity. These false membranes did not emit the offensive gangrenous odour. Beneath them, the tissue of the gums was red, and glossy, like the mucous membrane of the lip. The colour was not very bright. On the false membrane being removed, blood was seen to flow from the surface of the lip, and to coagulate in a short time afterwards. The teeth were white, and not loosened; and the false membrane insinuated itself between several of them; the upper lip was swelled in like manner, and also presented some dark points; the tongue was covered with a dark thick mucus. The patient was unable to open her jaws; a purulent, ropy liquid which had nothing of the gangrenous odour, flowed from her mouth. Over the whole surface of her body were scattered red, livid spots of the size of a lentil, which could not be effaced by the pressure of the finger; there were also many others of smaller size which appeared of more recent formation. *Draught with pulvis cinchonæ; drink acidulated with muriatic acid; astringent gargle.* Died at one o'clock in the morning of the 24th. *Autopsy eighteen hours after death.* The skin presented here and there spots of a deep colour, formed by the effusion of blood



into the substance of the skin only. There were none in the subcutaneous cellular membrane. The tongue, right amygdala, and gums, were covered by a thick, black, false membrane, which was removed without difficulty; the tissue of the amygdala was yellow, and soft, internally it was black; there were a kind of flaky filaments on its surface. The left amygdala was swelled in like manner; its tissue was yellow; the neighbouring cellular membrane was black; the amygdalæ did not emit the gangrenous odour. The epiglottis and glosso-epiglottic ligaments, presented black spots under the mucous membrane; there was an effusion of dark blood into its substance; the glands of the neck on both sides were swelled, without being the seat of any effusion; the nasal cavities did not contain blood.

The larynx, the trachea and bronchi were healthy; the lungs presented several black spots on their surface, varying in size, but never exceeding the dimensions of a sixpence; they were evidently owing to blood deposited underneath the pleura, and infiltrated superficially into the tissue of the lungs. The lungs were crepitating, except at their base, where they were loaded with fluid. The whole surface of the heart, more particularly in front, and more on the left ventricle than elsewhere, as well as under the serous membrane, presented purple spots of the size of a pin's head, in very close contact. The pleura under the third and fourth ribs, near the sternum, presented a considerable patch tinged with effused blood.

The stomach, rather livid, presented a small dotted patch; its mucous membrane presented the natural thickness and consistence. The intestines, liver, and spleen were healthy. The upper part of the right kidney was a little spotted with black under its proper membrane; the left was pale and less consistent. The uterus and bladder were healthy.

On the dura mater was found a large, red irregular patch, formed by blood deposited under the arachnoid membrane; on the side of the left lobe of the brain, between the arachnoid, and the pia mater, a slight sanguine infiltration; the corpus striatum, and corpus callosum presented a dotted appearance. A similar infiltration was remarked in the whole of the right lobe; the same disposition in the left lobe of the cerebellum. The muscles were red and healthy; the cellular tissue exhibited no traces of extravasation.

CASE CLIII.—*Purpura hæmorrhagica febrilis; petechiæ and ecchymoses, preceded by a kind of erysipelatous attack, &c.*—Madame Robert, 70 years of age, a washerwoman, of a sanguine temperament, with a coarse, ruddy skin. This woman inhabits a healthy lodging, lives well, leads a very regular life, and has not suffered from illness for a great many years. She began to be affected with headache in the beginning of May, and afterwards by general indisposition, and itching of the lower extremities, which swelled slightly. Some days afterwards the face looked puffed, and she became a patient in the hôpital de la Charité on the 31st of May, 1834. Both cheeks were swelled, tense and red as in erysipelas, and strewed with specks of a darker red, the size of a lentil, and not to be effaced by the pressure of the finger. These dark ecchymotic specks were also discovered on the nose and eyebrows; the eyelids were infiltrated with black blood, as well as the lobe of the right ear, which was mottled like marble. There was also a large black ecchymosis under the chin, but without any elevation of the epidermis. The body only presented two or three black spots on its posterior surface; both the superior and inferior extremities were swelled, hard, and covered with large black patches, the epidermis of which was raised by a sero-sanguineous liquid, and surrounded by a pink areola. These patches existed principally on the dorsal aspect of the forearms, and on the anterior surface of the thighs. On the latter there was also a hemorrhagic petechial dotting, particularly on the right thigh. The palms of the hands and soles of the feet were livid or black, swelled and slightly œdematous; an effusion of blood had taken place under the corion, and even into its outer surface but without any detachment of the epidermis; the patient complained much of pricking sensations in these parts.

All the spots had existed for six days. The lips were swelled. The gums were without any appearance of redness, and did not bleed. The patient had had no epistaxis, hæmoptysis, or hæmatemesis; neither had she ever remarked blood in her stools or urine. The tongue was moist and natural in colour. There was no sensible derangement of the functions of digestion. The respiration was free; there was no

cough. The sound of the chest on percussion, however, was somewhat dull; and the respiratory murmur in one particular spot of the posterior surface of the left lung was only heard very indistinctly. The patient was feverish (the pulse eighty-eight per minute). The temperature of the skin was higher than natural. The beat of the heart was regular; near its apex a single sound could alone be distinguished; the bellows sound (*bruit de soufflet*) at the base of the organ; the same bellows sound was heard synchronous with the first sound of the heart; the second sound was natural. Under the sternum and near its right margin both sounds of the heart were heard as in a state of health. The cerebral functions were intact. (*Sherbet of sulphuric acid for drink; half an ounce of Epsom salts.*) The bowels acted once during the day. On the following morning, the 1st of June, a great number of new hemorrhagic patches made their appearance on the limbs; they were purple, irregularly circular, and formed by sanguineous serum effused under the raised epidermis; some pain in the throat was complained of; the pulse was very full and hard; the skin hot; (*half an ounce of Epsom salts, drink as before, decoction of rhathany acidulated with nitric acid*); tormina, and several stools in the course of the day. On the 2d the tumefaction of the cheeks and limbs had diminished a little; that of the hands only still continued as before; but fresh hemorrhagic spots had been thrown out upon the limbs, principally in the line of extension. *The pulse continued full, the skin hot; the pain in the throat was not abated. Drink as before; venesection.* Little blood was obtained, the swelling of the arm having rendered the operation difficult.

On the 3d the fever continued; the left lung gave a dull sound on percussion; posteriorly, a slight bellows sound was heard; the expectoration was mucous without any mixture of blood; (the same drink; fifteen leeches to the epigastrium). The leeches drew little blood, yet gave relief; the spots of the forearm disappeared from the centre towards the circumference, as in lichen circumscriptus hæmorrhagicus; the fever had abated; (the same drink; leeches to the anus.) On the 5th the amendment continued; the swelling of the extremities subsided; the sanguinolent fluid effused beneath the epidermis, had either escaped or been absorbed; the epidermis had become dry on some of the patches; and the violet red of the skin had faded into a yellow: the redness and tumefaction of the face had diminished greatly; the pain in the throat had ceased; a little cough still remained.

On the 6th, the internal surface of the epidermis raised by the sanguineous serum was observed to be covered by a reddish coating, while the surface of the dermis retained its natural colour. The dark or yellow discoloration of those patches the epidermis of which had not been raised, continued to disappear from the centre towards the circumference, which assumed a jagged appearance. The same drink was continued through the following days; the spots from purple became yellow, and they afterwards disappeared completely. The swelling of the extremities subsided, but the cough and mucous wheezing or rattle in the left lung continued. There was still some expectoration. These trifling symptoms ceased some days afterwards, and the health was improving, when the hands became swollen afresh, but without any new hemorrhagic spots. A few doses of rhubarb put all to rights again, and the patient was in good health when she was discharged from the hospital. Auscultation of the heart gave the same results as when the patient was admitted. At no stage of the disease did the urine, treated with nitric acid, let fall any albuminous precipitate.

#### MORBID SECRETIONS OF THE SKIN.

1035. Exclusive of the formation of the epidermis, two species of extrinsic secretion occur in the skin, namely the cutaneous perspiration, and the follicular secretion. These secretions are liable to be modified by different diseases.



## PERSPIRATION.

Vocab. Art. *Ephidrosis*, *Dysodia*.

1036. The study of the cutaneous perspiration as a symptom of various diseases, cannot be separated from the history of these complaints themselves, particularly in a therapeutical point of view: the sweating that accompanies intermittent fever yields to the action of cinchona, that which attends phthisis to white agaric,<sup>1</sup> &c. But there are ephidroses or profuse sweats, which appear independently of any other lesion, and which must therefore be considered as peculiar affections.

1037. M. Dupont<sup>2</sup> has published an account of a curious case of a chronic *general ephidrosis*, which lasted upwards of six years. The woman who was thus affected became pregnant during this time, and was happily delivered of an infant which she nursed herself. This ephidrosis, which, according to him, was independent of any other affection, after having been fruitlessly combated by various remedies, yielded at last to extract of aconite, given at first in doses of half a grain, and gradually raised till sixteen grains a day were taken. Hartmann<sup>3</sup> cites the singular fact of a woman who, during pregnancy, perspired only on the right side of her body.

1038. Instances of excessive habitual cutaneous exhalation from the axillæ and feet, without any appreciable alteration in the texture of the skin or other organs, are more frequent. A man twenty-nine years of age, presented himself at the hôpital de la Charité to consult me with regard to an habitual ephidrosis of the feet, with which he had been affected for nearly four years. This exhalation was more copious in the right than in the left foot. From time to time he experienced, particularly during the night, transient pain in the right heel, similar to what might have been produced by the introduction of the point of a nail into the skin. The soles of the feet were slightly red, and looked macerated, as though they had been immersed for a long time in hot water. This appearance of the skin was less remarkable in the left than in the right foot. The patient assured me that the perspiration from the feet was equally profuse in winter as in summer, and that he was obliged to change his stockings three or four times a day. This man, who was of a sanguine-bilious temperament, and robust constitution, was not affected with any other disease of the skin. Foot-baths of cold Barèges water were recommended, and used with success in abating the ephidrosis complained of.

These profuse, and often fetid ephidroses of the feet<sup>4</sup> sometimes continue to a very advanced period of life. They are more copious and emit a more disagreeable smell during the heats of summer, and after the person affected has walked far. The sudden suppression of these ephidroses is liable to be followed by colicky pains of the bowels, toothache, various affections of a nervous character, and other bad effects.

I had a man about forty years of age under my care in the hôpital de la Charité, who, after the suppression of an habitual ephidrosis of the feet, so copious that the soles always looked white, and as if they had been macerated, became subject to headache; and I am at the present time attending a young man who has been attacked with chronic pleurisy, in consequence of the suppression of an habitual ephidrosis of the same parts.

Ephidrosis of the feet requires that the stockings should be frequently changed. When it occurs among persons of vigorous constitution, it may be rendered more endurable by the use of sulphureous foot-baths. Should the diminution or suppression of this secretion be attended with injurious effects, the secretion may be restored by covering the feet with worsted stockings and oil-silk overalls.

<sup>1</sup> Bisson (L.). De l'emploi de l'agaric blanc contre les sueurs dans la phthisie pulmonaire. Paris, 8vo. 1832.

<sup>2</sup> Dupont. Hist. d'une sueur chronique, etc. (Journal Général de Médecine. 1807, l. xxx. p. 33.)

<sup>3</sup> Hartmann. Diss. de sudore unius lateris, 4to. Halæ, 1751. Consult farther: Marcel. Donal. p. 91.—Haller, Elem. Physiol., 4to. t. v. p. 48.

<sup>4</sup> Von Büchner. Diss. de sudoris pedum in primis habitualis noxia suppressione. Halæ, 1762.—Paullini. Observ. Physic. Medic. cent. ii. obs. 78; Francofurti, 1704. —Vide similar cases in the Ephem. nat. cur. dec. ii. ann. ii. obs. 34.—Ann. iii. obs. 27. Ann. vi. app. p. 4.—Dec. iii. ann. i. app. p. 125.—Ann. ix. et x. obs. 96.

1039. The perspiration, by being changed in its composition, may acquire a sour or rancid odour, or a smell very similar to that of musk. I had a woman, under my care in the Hôpital de la Charité, affected with chronic peritonitis, and who, some time before her death, exhaled a very decided odour of musk; the pupil who called my attention to this circumstance, had observed the smell for several days, while dressing the patient who had been blistered, but thought it owing to a bag of musk put purposely into the bed to overpower other bad smells; the woman, however, assured us, that she had no description of perfume about her, and I satisfied myself that no musk had been brought to her from without, and that her linen, which was frequently changed, was not impregnated with any perfume before being delivered to her from the laundry of the hospital. The odour of musk, the existence of which was fully ascertained by myself and several physicians, and which was very perceptible on the arms and other regions of the body, did not become more powerful from rubbing.—After continuing for about eight days, the smell became fainter, and nearly vanished the evening before the patient's death. Speranza<sup>5</sup> relates a similar case. Schmit has inserted in the Ephemerides Naturæ Curiosorum, an account of a journeyman saddler, three and twenty years of age, of rather robust constitution, whose hands exhaled a smell of sulphur so powerful and penetrating as very soon to infect any room in which he happened to be. I was once consulted by a valet-de-chambre who could never keep a place in consequence of the unpleasant odour he left behind him in the rooms which he had been occupied in cleaning. There have been instances of individuals who, to obtain their discharge from military service, have simulated these offensive perspirations, by rubbing their axillæ with the animal oil of dippel, assafetida, a piece of much decayed cheese, putrid fish, &c.

1040. Finally, the colour of the cutaneous respiration may also be modified by changes in its composition. Instances are recorded of green,<sup>6</sup> black,<sup>7</sup> blue,<sup>8</sup> and yellow,<sup>9</sup> perspirations, &c. Not having myself met with any thing of the kind, I merely refer to the works in which mention is made of such cases. With regard to the urinous perspiration observed among persons suffering from retention of urine, I do not think this a proper place for making any farther mention of the circumstance.

## MORBID SECRETION OF THE EPIDERMIS.

1041. The secretion of the epidermis is modified under a great variety of circumstances; it is active and very abundant in the squamous inflammations generally; it is remarkable, though unaccompanied with desquamation in ichthyosis; it is thrown out in greater quantity on those parts of the skin which are habitually exposed to repeated pressure, as on the palms of the hands; and soles of the feet, where it occasions callosities, bunions, and corns, above the knee in shoemakers, on the elbows of paper stainers, and on the instep of the persons who polish oaken floors, &c., in all of whom it causes appearances very similar to what is seen in ichthyosis. Finally, the epidermis is sometimes observed to be secreted in excess after the use of blisters, in the neighbourhood of the cicatrices of ulcers, and of certain cutaneous eruptions, being in some instances characterized by increased thickness of the membrane, in others by its constant renewal and exfoliation. The skin, on the termination of certain acute diseases, is also known to renew its epidermis several times successively, this covering being detached in many instances in almost insensible furfuræ.

It is necessary to distinguish the furfuraceous desquamation which very commonly takes place from the skin of the aged, from exfoliations

<sup>5</sup> Speranza. Obs. d'odeur aromatique exhalée par la peau et l'avant-bras (arch. gén. de méd., l. xxx. p. 399).

<sup>6</sup> Borellus. Hist. et obs. med. physic., cent. ii. obs. 54.—Paullini, cent. i. obs. 38.

<sup>7</sup> Bartholinus. (Acta. Hafn. i. obs. 70.)—Ephem. nat. cur. dec. i. ann. ii. obs. 19.

<sup>8</sup> Conradi. Blue perspiration of one half of the scrotum. Handbuch der Pathol. Anat. p. 292.—Lemery. Hist. de l'Acad. des Sciences, 1701.—Fontenelle, sur les sueurs bleues (Journ. de chimie médicale, tom. i. p. 330).

<sup>9</sup> Ephem. Nat. Cur. dec. i. ann. vi. et vii. obs. 78.



of the kind under consideration, as well as from that of the squamous inflammations generally, and particularly of pityriasis.

New-born infants from three to five days old, almost always present an exfoliation of the epidermis.<sup>1</sup> In fact, some days after birth, the epidermis loses its elasticity, becomes dry, brittle, and less firmly attached to the skin; it then cracks, and by and by is detached in various modes according to the region. Thus, from the folds of skin about the articulations, from the groins, popliteal regions, &c., it is thrown off in linear shreds; from the chest, soles of the feet, and sometimes from the abdomen, the desquamation takes place in large flakes; finally, from the sternum, cheeks, between the shoulders, &c., the epidermis is detached in small furfuraceous scales. The skin of the parts which have recently exfoliated is red, and inflames with the greatest readiness; the epidermis is soon restored in its normal state, excepting in the folds of the skin, which continue for some time to secrete a mucous matter.

This exfoliation of the epidermis has been known to occur twice conspicuously in the same infant; in other cases the desquamation is often almost imperceptible.

The duration of these exfoliations varies from one to two months, but they may extend to a longer period, and become very considerable in children which have fallen into a state of marasmus. The epidermic exfoliation of new-born infants, requires no peculiar medical treatment. The skin has only to be kept clean and dry.

## NEUROSES OF THE SKIN.

1042. The sensibility of the skin may be diminished (anæsthesia), or augmented (hyperæsthesia), or vitiated.

1043. Anæsthesiæ of the skin may be either local or general; the former are sometimes strictly limited to the parts supplied by the branches of a single nervous trunk: at the hôpital de la Charité, I have met with three cases of paralysis of the skin of one side of the face, evidently depending on a lesion of the fifth pair of nerves. The first case was that of a young woman suffering from a disease of the heart, who, during her stay in the hospital, without any known cause, lost all sensation in the right side of the face, the power of seeing with the right eye, that of smelling with the right nostril, and that of tasting with the right half of the tongue. These serious symptoms were completely subdued by bleeding, cupping over the mastoid processes, and perpetual blisters applied to the forehead and cheek. Another case was that of an elderly woman labouring under dropsy with albuminous urine, and having a tumour deeply seated in the left temporal cavity. She was simultaneously affected with insensibility of the corresponding cheek, loss of smell and taste, and also with paralysis of the muscles of the face of the same side, and of the rectus externus muscle of the right eye. After death, I ascertained, that the anæsthesia was owing to an alteration of the plexus of the fifth pair of nerves, which had become red, and adhered strongly to the dura mater and neighbouring parts, particularly to the nerve of the sixth pair. There was also a tumour deeply seated in the zygomatic fossa, which compressed the neighbouring parts. The left lobe of the cerebellum near its peduncle, was yellowish, and rather soft; and its membranes, which presented granulations, adhered to its surface. The third case was that of a man, and was altogether similar to the first as far as the phenomena accompanying it went, but it was not successfully treated.

1044. Under other circumstances, anæsthesia has been seen to affect various portions of the surface of the skin, receiving branches of nerves from several different sources. In other cases, the anæsthesia has appeared to be limited to certain branches of a single nerve, the phenomenon not extending to other ramifications of the same trunk. I remember to have been consulted by a man, the whole of the skin of whose right thigh, from the hip to the knee, was so insensible that it

could be pierced with needles, without his experiencing any pain. Rubbing the part with nettles produced the appearance of urtication, but without smarting or itching. Finally, anæsthesia has been observed to be limited to a portion of the trunk, to a leg, a hand, &c.; and, as in the preceding cases, without the motion of the regions affected being implicated. Among these local anæsthesiæ, there is another which I have only observed in a single instance; it was a case of paralysis of the skin of the belly, in a man labouring under colica pictonum. I communicated a curious case to Mr. O'Brien, which he has inserted in his inaugural dissertation; this was anæsthesia of the skin of the arm, produced by the presence of a clot of blood in the brachial artery, which had occasioned a cessation of the radial pulse, and a diminution of the temperature of the arm during life. In several cases of gangrene, accompanied with the formation of clots in the principal artery of a limb, I have observed diminution of temperature, and absolute insensibility of the skin, without there being any appreciable change in its outward appearance.

1045. Insensibility of the skin may sometimes be *general*, or extend to almost all the regions of the body, without being attended with any evident affection of the organs of motion. But more frequently anæsthesia of one or more regions of the body, is symptomatic of important lesions of the brain or spinal marrow,<sup>2</sup> and coincides with paralysis of the motive powers; at the same time, it must be observed that, in the case of cerebral hemorrhage, with loss of sensation and motion, it is not unusual to find sensation return, even when paralysis of motion continues. (a)

### Historical Notices and particular Cases.

1046. Galen<sup>3</sup> having remarked the loss of sensation in a man who had had a fall on the neck and upper part of the back, gave the name of *ἀναισθησία* to this paralysis of sensation. Ferdinandus<sup>4</sup> mentions

(a) Anæsthesia of the skin may, as M. Andral justly remarks, (*Cours de Pathologie*, &c.) be present without any other symptom of disorder of the nervous centres, and also without any perceptible lesion of these parts. He instances, under this last category, the case of a woman, fifty-six years old, in whom there was complete insensibility of both hands and both feet. This disorder came on after sleeping in the sun; the skin was covered with a phlyctenoid eruption. So great was the cutaneous insensibility, that this woman frequently burned her toes without knowing it.

Still more anomalous cases are those in which, at irregular distances, there occur disseminated insensible spots, of a circular form.

Anæsthesia may result from lead poisoning. The proportion of cases of this disorder, to those of paralysis of motion, recorded by M. Tanquerel, (*Traité des Maladies de Plomb ou Saturnines*), was 19 to 50. In seven of the former, the insensibility was confined to the skin. In one of these was superficial anæsthesia, with hyperæsthesia, or exalted sensibility of the parts beneath, and paralysis of the corresponding muscles.

The loss of sensation, from lead poisoning, is always limited in its extent—being sometimes confined to certain parts of the abdomen, or of the chest or neck, and sometimes occupying the limbs. It may be complete or partial—frequently shifting its place, or varying in extent. Sometimes the attack is preceded by slight numbness, but more commonly it reaches its maximum with great rapidity.

The treatment of cutaneous anæsthesia will vary according to its presumed cause. If it depend on lesion of a nervous centre, recourse will be had to purgatives, and cutaneous revulsives, such as friction, irritating liniments, blisters, &c., either to the part or to the spinal column. Strychnia is represented to be a medicine of considerable power. Sulphureous baths and douches, and electricity, are also among the therapeutical means resorted to in cutaneous anæsthesia.

<sup>2</sup> Consult: Lallemand. *Rech. Anatomico-pathologiques sur l'encéphale*, 8vo. Paris, 1826-1834.—Rostan. *Rech. sur le ramollissement du cerveau*, seconde édit. 8vo. Paris, 1823.—Ollivier (d'Angers). *De la moelle épinière et de ses maladies*, 8vo. Paris, 1823.—Serres. *Anatomie comparée du cerveau*, 2 vols. 8vo. Paris, 1826.

<sup>3</sup> Galenus. *De locis affectis*.

<sup>4</sup> Ferdinandus (E.). *Centum historiæ, sive observationes et casus medici*, etc. Venetiis, fol. 1612. *Historia* 46.

<sup>1</sup> This exfoliation has been particularly studied by Orfila and Thierry; and by Billard in his *Traité des maladies des enfans nouveau-nés et à la mamelle*, p. 32. Paris, 1828.



the case of a young man, twenty-four years of age, who, after having been seized with insensibility of the whole body (the head excepted), was cured by purgatives, and other remedies. A remarkable example of anæsthesia occurs in the *Ephemerides Naturæ Curiosorum*.<sup>1</sup> Thomas Bartholin<sup>2</sup> cites the case of a young man who had lost the senses of taste and feeling; and that of a young girl who could allow the skin of her forehead to be pricked, and that of her neck to be burned, without experiencing any pain. Lamothe<sup>3</sup> mentions a case of insensibility of the hands and feet, in consequence of a kick from a horse in the head, without any external wound. In the *Mémoires de l'Académie des Sciences*, for the year 1743, we read an account of a soldier who, after having accidentally lost all kind of sensation in his left arm, continued to go through the whole of the manual exercise with the same facility as ever. It is known, also, that La Condamine was able to use his hands for many years after they had entirely lost their sensation. Finally, many observations on, and cases of, anæsthesia published by Daniel,<sup>4</sup> Hébréard,<sup>5</sup> Alexander Reid,<sup>6</sup> John Yelloly,<sup>7</sup> and Mathacus, which are all cited by O'Brien,<sup>8</sup> who has detailed numerous very interesting additional cases in his inaugural dissertation, may be consulted with advantage.

**CASE CLIV.—Paralysis of the skin of the left side of the trunk, without affection of the muscles.** George Pilavoine, forty-three years of age, a cartwright, was admitted into the Hôpital de la Pitié on the 16th of January, 1827. Languid temperament; apoplectic constitution; a little above the middle size; stoutly built; short neck; face red and injected. For the last three days, total loss of sensation in the skin of the left side of the trunk. This paralysis extends from the left mammary region to the haunch, and from the vertebræ to the linea alba.

Throughout this whole extent the skin is insensible; it may be pinched or punctured without the patient being even aware that he is touched. The paralysis is not quite so complete in those parts of the integument that are in connection with the healthy skin. Even the parts most completely paralyzed, do not present any perceptible alteration in their colour or texture. The subjacent muscles of the trunk, as well as those of the other regions of the body, possess all their powers unimpaired. The patient is free from fever, and makes no complaint except of slight headache. The pulse is strong and full.

This patient informed us that, five years previously, he had occasionally experienced, on going to bed, an involuntary spasmodic contraction of all the muscles of the back part of the body, which deprived him of the power of changing his position or of speaking; and that, on these occasions, he had scarcely time to give warning to his wife who, by dragging him from his bed, always succeeded in arousing him from the kind of benumbedness into which he had fallen. He then walked about the room, and afterwards returned to his bed, little fatigued by the attack, which was sometimes preceded by sensations of pricking, and confusion of head. These attacks recurred for a period of two years, particularly during the spring, when they happened almost once a fortnight, and sometimes even twice in the same day. Besides these attacks, he was also subject to headaches, for which he used to get bled. These headaches had become less frequent, when, about four months ago, while he was at work, he was seized with a violent attack of giddiness, fell upon a wheel, and received a wound of considerable size upon the right side of his forehead, for which he became a patient during two months in the Hôtel Dieu. Since that period, the right eye has continued inflamed, the headache has returned, and after three attacks of benumbedness, similar to those with which he had already been affected, the patient became affected with the paralysis of the skin of the trunk, of which mention has been made. (*V. S. ad* 3xii.; *low diet*; *lemonade*.) 18th

<sup>1</sup> Nat. Cur. Ephem. ann. iii. obs. 251, p. 390. De perfectâ anæsthesiâ, per totam corporis peripheriam.

<sup>2</sup> Bartholini (Th.). Hist. Anat. Medic. rar. cent. iv. hist. 82. (Sensus abolitus.)

<sup>3</sup> Lamothe (Guil. Mauquest de) Traité complet de chirurg., etc. Paris, 1722, 3 vols. 12mo. Obs. 168.

<sup>4</sup> Journ. général de méd., tom. lxi. 1817, p. 161.

<sup>5</sup> Bullet. des Sc. méd., vol. i. 1807.

<sup>6</sup> Edinb. Med. and Surg. Journ., vol. xxxi. p. 292.

<sup>7</sup> Medico-Chirurgical Transactions, vol. iii.

<sup>8</sup> O'Brien. De l'anesthésie, 4to. Paris, 1833. Consultez en outre: Zukowski. Diss. de anæsthesia. Vilnæ, 1802.—Lesauvage. Hémiplegie du sentiment sans lésion du mouvement. [Bull. des sc. médic. de Férussac, t. xix. p. 198.]

and 19th. The insensibility of the skin continues; the headache has left him; tingling in the whole of the left side of the body, and in both of the thighs, which are affected with involuntary convulsive motions. 20th and 21st. Same state, but the twitchings of the thighs occur more rarely. 22d. (*V. S. ad* 3xvi.; *water gruel*; *acet. morphiae*, one-sixth gr.) 23d and 25th. The same insensibility of the skin of the trunk; but the muscular twitchings of the thighs have ceased. The right eye is more highly inflamed (*eight leeches to the right temple*); it became less painful afterwards. 25th. The skin of the left side of the trunk is somewhat more sensible; the sensation seems to return from the circumference of the part affected towards its centre. The eye is again inflamed and painful. A seton in the nape of the neck, a plaster of antimon. tartaris. to the paralyzed district. Feb. 1st. The plaster had scarcely produced any irritation of the skin. The paralysis was now gradually abating; on the 7th the patient was still under treatment.

**CASE CLV.—Insensibility of the skin of the whole body without implication of the power of voluntary motion.** A. A. Barbier, aged 60, a worker in marble, became a patient in the hôpital St. Antoine, on the 9th May, 1829. This man had been bitten severely in the arm, three years before, by a dog which was not mad, and he still continued to speak of this accident; the attack of the animal having evidently frightened him greatly. Every time he saw a dog, indeed, his limbs trembled, and he occasionally even suffered a convulsive attack, with foaming at the mouth, which lasted for an hour and a half. These attacks occurred at least once a month, and sometimes oftener. Since the date of this fright he has also been subject to headache, and is occasionally seized with involuntary fits of laughing like a child or a paralytic person; these laughing fits often precede the epileptic attacks. He has lost his memory and often talks incoherently in the intervals between the fits. He has been bled several times at the periods of the epileptic attacks, but this does not seem to have done any good. On the 19th of May, this man's intellectual powers were evidently very much affected; his senses were dull; he was almost deaf; his tongue when thrust out trembled; he had two small wounds on the head; one above the left eyebrow, the other on the hairy scalp, occasioned by a fall on his entrance into the hospital. Here he was bled once. Several days afterwards a great degree of insensibility of the skin of the whole body was observed. This was greatest in amount over the arms, less over the legs, abdomen and thorax. If the attention of the patient were otherwise engaged, he might be pricked with a pin, and pinched without his appearing to know any thing about it. He moved the limbs freely, making no complaint of weakness in any of them. The pulse was full; he had no headache; no uneasiness in the chest or abdomen. (*V. S. on the 26th of May*.) The blood was buffy; but it was serous. The alvine and urinary discharges are natural, and preceded by the usual sensations announcing a call.

On the 29th, the soles of the feet were less insensible than any other part of the body. The scalp was completely void of sensation. On the 6th of June the anæsthesia was cured, and the patient tranquilized on the subject of the bite he had received, left the hospital well satisfied.

1047. *Hyperæsthesia*,<sup>9</sup> or exaltation of the sensibility of the skin, is a phenomenon observed in the current of several nervous diseases, and especially in connection with inflammatory affections of the spinal cord. The sensibility of the skin is also perverted or exalted to a great extent in urticaria, in prurigo, and in several other cutaneous eruptions. But I have here only to make mention of those cases in which the sensibility of the skin is increased without any apparent change in its outward appearance, in its thickness, &c.

I have occasionally observed the skin affected with pruritus of a very violent description, without being the seat of papulæ or any other form of eruption, in patients labouring under chronic diseases of the liver, complicated or not with icterus. We also know that in certain of the prurigos to which the aged are subject, the pruritus attains such a degree of intensity that patients tear themselves with the fury of madness or despair, and afterwards tremble almost convulsively from head to foot, without there being more than a very

<sup>9</sup> Chomel. Sensibilité exagérée des tégumens des membres inférieurs. Gazette Méd. de Paris, 1831, p. 140.



small number of papulæ, the presence of which is altogether inadequate to account either for the violence of the pruritus or for its continuance after their destruction. It is with justice that those cases of pruritus, which are independent of papular eruptions, have been separated from those that are connected with the presence of these affections.<sup>1</sup>(a)

## ALTERATIONS IN THE COLOUR OF THE SKIN.

[DISORDERED CHROMATOGENOUS FUNCTIONS OF THE DERMIS.—E. Wilson. MACULÆ.—Willan.] (b)

1048. Besides the morbid tints occasioned by inflammatory affections of its tissues, and hæmorrhagic effusions into its substance, the

(a) "*Anæsthesia of the trigeminus nerve.*—A woman, 42 years of age, had the misfortune to fall and strike the back of the head on the edge of a stair. A year afterwards the catamenia ceased altogether, and from this time she began to suffer from frequent attacks of most violent sneezing. No unusual appearance could be detected in the nostrils; and it was therefore suspected that there was an irritation of the fifth pair of nerves in the cranial cavity. Along the course of the first and second divisions of the trigeminus there was no loss of sensibility; but the third division was decidedly *anæsthetic*.

"The left half of the under lip, both on its inner and outer surface, and the left half of the chin, were quite insensible, even when pricked deeply with a needle: the inner portion of the muscle of the corresponding ear and of the meatus auditorius were equally dead to all impressions. The teguments of the left temple near the hair, and also the entire left half of the tongue, were perfectly insensible alike to injury and to changes of temperature: this side of the tongue, too, had lost its sense of taste. But when the skin of the temple near the forehead was pricked, the patient immediately complained—in consequence of this part being supplied with twigs from the *frontalis* nerve. On the right side all the corresponding parts were quite sensible; and even in the left eyelids the other sensory nerves retained their integrity, both as respected sensation and power of motion. The organic and nutritive functions of all the parts, which were insensible, were not at all impaired. The patient eventually died of dropsy.

"*Dissection.*—At various points on the surface of the brain there was an exudation of lymph; and on the lower surface of the posterior lobe the cerebral substance was found in a state of *ramollissement*, to the extent of an inch or so. The third, or submaxillary branch of the trigeminus pair on this (the left) side, where it entered the foramen ovale, appeared to be enveloped with a red vascular network, composed partly of fibres and partly of transparent vesicles. On close inspection, it seemed to be either an exudation on, or an hypertrophied state of, the neurilemma: the substance of the nerve itself was swollen, of a yellowish colour, and somewhat harder than it usually is. But it was only that portion of the third branch which arises from the Gasserian ganglion, that was so altered. The motory portion on the inner side was unchanged, and coalesced with the larger division beyond the diseased point. The various twigs to the pterygoid and buccinator muscles, to the temple, the tongue, and the lower jaw, were throughout in a normal condition, as well as the third branch of the right trigeminus, and also the glosso-pharyngeal on both sides."—*Med. Chir. Rev.*, 1841—from *Medicinische Jahrbücher*, t. xxix.

(b) The disorders of the Chromatogenous Functions are divided by Mr. E. Wilson into: 1. *Augmentation of pigment*, which includes nigrities, pigmentary nævi and moles; 2. *Diminution of pigment*, or leucopathia, albinismus and vitiligo; 3. *Morbid alterations of pigment*, embracing ephelis or sunburn, lentigo or freckles, chloasma or liver spot and melasma; and 4. Chemical discoloration of the dermis; as in the oxide of silver stains.

skin of the human body is subject to various alterations in its colour.<sup>2</sup> Some of these depend on a deficient supply or diminished secretion of the pigmentary matter (*albinismus leucopathie*): others upon an adventitious or accidental accessive deposit of the ordinary pigmentum (*nigrities, ephelis, lentigo*), or of an unusual colouring matter (*chloasma, melasma, pigmentary nævi*); a third class is owing to the introduction of foreign substances into the tissue of the skin (*icterus, artificial stains, the slate tint that follows the use of the nitrate of silver*).

## LEUCOPATHIA. [DIMINUTION OF PIGMENT.]

Vocab. *Albinismus, Leucopathia.*

1048. General or partial, congenital or accidental colourless states of the skin, arising from absence or deficiency of the pigmentum, and of the colouring matter of the hair, are designated under the name of *leucopathia* or *albinismus*.

1049. In *general congenital leucopathia (albinismus)*, the skin is usually of a dull white, which has been compared to the colour of milk, and sometimes of an extremely pale-yellowish tint. The hair of albinos is smooth, silky, generally straight and flowing, but sometimes crisp like that of negroes; it is of a peculiar white colour, like cotton or bleached silk, and different from the snowy whiteness which age produces, and from the golden yellow tint of light hair. The eyebrows, the beard, and the hair of the pubes, are equally blanched; the rest of the skin is covered with a down of extreme whiteness and softness. The iris is almost always of a light blue or pale rose colour, and the pupil of a decidedly red hue, which arises from the absence of pigmentary matter in the choroid membrane and uvea.

Albinos are generally of weakly constitution, middling stature, and limited intelligence, although some examples to the contrary have been quoted. The great sensibility of the eye does not allow them to go out in the middle of the day with comfort, unless the weather be cloudy; they are then constantly winking, and the pupil contracts and dilates, oscillating continually. The edges of the eyelids are often covered with glutinous exudation, and tears run from their eyes when exposed to the light of the sun. The moral constitution of albinos is in relation with the general weakness of their organization.

1050. *General accidental leucopathia* has never been observed except among negroes. Whites, after long confinement in places from which light is excluded, undergo a blanching which must not be confounded with albinismus.

1051. *Partial leucopathia* may be congenital; negroes who are affected with it, and who are known by the name of *piebald negroes*, present on different parts of the body, white spots, of various shapes and sizes. In the Museum of Natural History of Paris, there is a portrait of a young piebald negro, whose skin in the colourless parts was of a pale rose colour instead of the usual dead white. When these spots are on the hairy scalp, the hairs growing from them are also colourless. These cases of partial congenital deficiency of colour in the skin have never been observed among whites.

1052. Both blacks and whites may be accidentally affected with similar partial colourless states of the skin, the extent of the patches augmenting progressively.

I have often remarked, that these colourless patches, wherever they appeared, occurred simultaneously with considerable depositions of pigmentary matter within the skin of some other region or of the neighbourhood of the white spots. A young girl in the Hôpital Saint Antoine had spots of lentigo on the face, and leucopathic patches on the neck and body, which had only appeared within a few months. I have observed accidental local albinismus in all parts of the body, but more frequently on the genital organs and in their immediate neighbourhood than elsewhere.

1053. Not having had opportunities of making anatomical researches into the state of the skin affected with general or partial leucopathia, I shall confine myself to stating, that the whiteness of the skin is attributed to the absence of pigmentary matter. In the body of an albino who died in the hospital at Milan in 1783, the absence of the uvea

<sup>1</sup> J. Wilson. A Familiar Treatise of cutaneous diseases: Sense of itching without eruption, p. 147. London, 8vo. 1814.

<sup>2</sup> Bose. De mutato per morbum colore corporis humani. Lipsic, 4to. 1758.



and of the colouring matter of the choroid membrane was ascertained; neither could any traces of pigmentary matter be detected on the external surface of the dermis.

1054. *Causes*.—Except in cases of an hereditary nature, the etiology of leucopathia is very obscure; it is generally attributed to weakness; it occurs in all the races of the human kind, in all parts of the globe, and among a great many animals.

The children of an albino and a person of colour are generally mulattos, but sometimes albinos. Although albinos are more common in Africa, still they have also been met with in other southern latitudes inhabited by blacks, in the isthmus of Darien, in Brazil, in Sumatra, in New Guinea, &c.; and even in Europe among whites, in Denmark, England, France, Switzerland, &c.

*Accidental partial leucopathia*, like the blanching of the hair which occurs independently of age, is most generally the consequence of some mental emotion. I was very recently consulted at the hôpital de la Charité by a man thirty years of age, who, upon the loss of what was to him a considerable sum of money, became affected with partial leucopathia, characterized by white, milky spots, disseminated over the body and limbs, with partial blanching of the hair, whiskers and eyelashes.

1055. *Diagnosis*.—General leucopathia differs from chlorosis in the tint being of a more dead white, and the latter disease not being accompanied with blanching of the hair or of the uvea and choroid membrane; the paleness of the skin in leucopathia results from the absence of the pigmentary matter, while in chlorosis the pale hue of the integuments would seem to depend in a great measure upon the small quantity of blood distributed to them.

At a period when the diseases of the skin were little studied, some analogy was supposed to exist between the state of this tissue covered with the white squamæ of lepra and leucopathia; but at the present day the idea of associating alterations so different in their natures is impossible. Partial leucopathia, which has also been described under the name of *ephelis alba*, is very different from every other description of colourless state of the integuments. Certain colourless states of the skin, however, occasioned by slight, but long-continued pressure, particularly those which are sometimes seen below the pads of the bandages worn by persons effected with hernia, bear some analogy to partial and accidental leucopathia.

1056. *Treatment*.—General congenital leucopathia has been very little studied in a therapeutic point of view; this congenital malformation is generally looked upon as incurable. In partial and accidental absence of colour of the skin, if the patches are in the face, and it is the wish of the patient, attempts may be made to promote the secretion of the pigment, by exciting the blanched patches with flying blisters or stimulating liniments.

#### *Historical Notices and particular Cases.*

1057. Lecat,<sup>1</sup> Buffon,<sup>2</sup> Buzzi, (Fr.),<sup>3</sup> and Blumenbach,<sup>4</sup> were the first who instituted inquiries of any importance into the subject of general albinism. A great number of new cases have been published lately.<sup>5</sup>

Observations on accidental partial leucopathia are more rare. Several affections in which the colour of the skin is changed are indicated

<sup>1</sup> Lecat. *Traité de la couleur de la peau humaine*, 8vo. Amsterdam, 1765, 3d part; de la métamorphose des nègres en blanc, etc.

<sup>2</sup> Buffon. *Sur les blafards et les nègres blancs*. Hist. Nat. Gén. et particulière, etc. Suppl. t. iv. pp. 555-578, ed. Sonnini, t. xx. pp. 336-377.

<sup>3</sup> Buzzi (Fr.). *Dissertazione storico-anatomica sopra una varietà particolare di uomini bianchi eliofobi*, 4to. Milan, 1784.

<sup>4</sup> Blumenbach (J. Fr.). *De generis humani varietate nativa*. Ed. 3d., Götting., 1795, 8vo.—Trad. en français par Fred. Chardel, sous ce titre: *De l'unité du genre humain et de ses variétés*, etc. Paris, 1804, 8vo., p. 271.—*De oculis leucæthiopum et iridis motu commentatio*. (Comment. soc. reg. sc. Götting., vol. vii. pp. 29-62, 1 pl., 1784.)

<sup>5</sup> Sachs (G. T. L.). *Historia naturalis duorum Leucæthiopum, auctoris ipsius et sororis ejus*. Sulzbach, 1812, 8vo.—Mansfield. *Réflexions sur la leucopathie, considérée comme le résultat d'un retardement de développement*. Journ. complém. des sc. médicales, tom. xv. pp. 250-53.—Etwas über Hemmungsbildungen in Allgemeinen, und fortgesetzte Untersuchungen über die Leukopathie (Mechel's Archiv. für Anatomie und Physiol., 1826, t. i. pp. 96-104).—Rennes. Leucozoön (Arch. génér. de méd., t. xxvi. p. 371).—Geoffroy Saint-Hilaire (Isidore) *De l'Albinisme* (Hist. génér. et particulière des anomalies de l'organisation chez l'homme et chez les animaux, etc., etc. Paris, 1832, t. i. pp. 293-323).

under the name of *vitiligo*;<sup>6</sup> and although the description of λευκοι bears considerable analogy to that of partial leucopathia, many translators and critics have been led, from a passage in Hippocrates (*Procrhet.* lib. 11, *ad finem*), to imagine that under this name the ancients meant to indicate a very serious disease, to wit, elephantiasis *anathesiaca*, the Greek or Jewish leprosy.

Hamilton, Bree, &c., have reported cases of accidental partial leucopathia.<sup>7</sup> M. Alibert has lately described leucopathia under the name of achroma.

CASE CLVI.—*General congenital leucopathia in a negress*. A white negress, born in Dominica, in 1759, of black parents, has all the features of a negro; the hair, eyebrows, and eyelashes are also those of her race in all except the colour; the hair is of a very short woolly kind, and slightly coloured; the eyebrows, as well as the eyelashes, are of a more golden hue; the general appearance of the skin is a dull white, with a slight pink tint on the cheeks, lips and nose, which becomes deeper under the influence of mental emotions; the skin of the face is slightly spotted over the cheeks by small marks of a violet hue, similar to that of the complexion in a fresh-coloured aged European; the edges of the eyelids are long, and the external angles slope upwards; the eyelids themselves are very narrow, and the parts over them are raised; the iris is gray, with an orange-coloured tint towards the crystalline lens; the eyes are in continual involuntary and irregular motion; the sight is weak without being short; the light of the sun, that of a fine day, or even of a torch is distressing. But this girl neither sees better, nor later than others, as the day declines. The breasts seemed very large for this young woman's age; she is of the ordinary height and rather well made, except that the right shoulder is somewhat larger than the other; the hands are large, the feet strong and also very large; the little toes are broad, the skin appears rather wrinkled, and upon the arm there are several freckles; her voice is sweet like that of negresses generally; she has the odour of the race also, but her skin is less soft than it is commonly in blacks.—(*Journ. Physique de l'Abbé Rosier*, 1777.)

CASE CLVII.—*General congenital leucopathia in a white*. I went, in March, 1827, to the Hôpital de Bicêtre, to see a man named Roche, an albino, better known in the hospital by the name of the *white rabbit*. This man, then forty-three years of age, at first sight had the appearance of an aged person: the hair, eyebrows, eyelashes, eyelids, beard, &c., are of a milky white; the uvea is very little coloured, and traversed with small red and gray streaks; the pupil is as red as blood. The skin is nearly of the tint peculiar to persons of a very fine skin, and without the dull white colour generally seen in albinos. The mucous membranes of the eyelids, the tongue and the genital organs are not at all blanched, but of the same red tint as among well-constituted Europeans. The nails are of the usual form and size. The eyes of this man are very sensible to light; his eyelids are generally half closed, and he winks continually. The muscles of the limbs and body are pretty well developed; his intellectual faculties are limited; he understands the questions which are put to him, but his short or monosyllabic replies are comprehended with difficulty. He articulates badly, almost like a person affected with chorea or a congenital cleft of the palate. Roche was sent to Bicêtre at nine years of age, in 1793, on account of his very limited understanding. The organs of generation are well developed, and the principal functions regular. A man engaged in the hospital, and who had known the parents of this albino, informed me that they never had any other children, and that the mother, according to the vulgar notion, attributed the defective constitution of her son, to her having been alarmed, during her pregnancy, at the sight of a large white cat. This woman was a native of Picardy, and of a dark complexion; the father was of Auvergne, and of good constitution.

CASE CLVIII.—*General congenital leucopathia in a white*.<sup>8</sup> We have had this year, 1809, at Paris, two individuals, brother and sister, the one ten, the other twenty years of age, born in the Bourbonnais,

<sup>6</sup> Celsus (A. Corn.). *De re medica*, 18mo. Paris, 1823, lib. v. sect. xviii.

<sup>7</sup> Hamilton (M. R.). *Cas de leucopathie accidentelle chez un nègre* (Arch. génér. de méd., mai, 1827).—Bree. *Obs. de decoloration de la peau et des poils*. Arch. génér. de méd., mai, 1828.—Bissel. *Sur un changement de couleur survenu à la peau d'un Américain*. Journ. univers. des sc. méd., t. xii.

<sup>8</sup> Gaultier (G. A.). *Recherches sur l'organisation de la peau de l'homme*, etc., 8vo. p. 71. Paris, 1819.



whose skin was of a dead white, without apparent vitality, and like wax. The hair of these individuals was soft, very long, and of a whiteness equal to that of the skin; the iris was reddish; the eyes appeared distressed by the bright daylight, and both the eyes and the eyelids were in almost constant and involuntary motion. The skin was soft and flabby; the muscles very small. Both of these individuals were alike apathetic and dejected.

We know two other children, the one eight, the other ten years of age, who are affected in the same way; they have soft fair hair, which becomes whiter as they grow older. They are born of perfectly healthy parents; their brothers are not similarly affected.

CASE CLIX.—*Congenital leucopathia; the iris blue, the pupil red, skin of a pinky white.* Louisa de Brun, three years of age, was born in Paris, an albiness; the mother has hair of the very lightest kind; the father's hair is of a light brown colour. This child has always enjoyed good health, is lively and pretty, talks a great deal, and has never shown any symptoms of idiocy; her hair is of a brilliant white, almost colourless, of the usual strength, straight and not woolly. Her eyes are in constant motion. The iris is of a blue colour, the pupil red, the eyebrows very thin, short and extremely white; the eyelashes, particularly those on the upper eyelid, are long; the skin is white, with a slight rose tint. This child has only eighteen teeth; the two upper small incisors are wanting; she has two fistulous sores in the left leg and is affected with eczema of the hairy scalp and ears.

The mother of this child informed me that she had another daughter fifteen years of age, also born an albiness, whose hair was now of the very fairest description.

CASE CLX.—*Lentigo of the trunk from childhood, leucopathic spots, and reddish-brown hue of the skin in their vicinity, of one year's standing.* Thirion, a porter, forty-six years of age, had several kinds of spots on the skin. Some (*lentigo*) reddish, lenticular and very superficial, had existed in great numbers on the upper part of the chest and back, since childhood. Other spots of a dull white colour, superficial, irregular, and mostly circular, were very numerous on the skin of the back shoulders and chest; in fact, the skin of the chest, upper extremities, back, posterior parts of the neck, and of the loins and sides, was of a reddish-brown hue, while that of the buttocks, and the posterior aspects of the upper extremities, was of the usual white. The dull white spots mingled with the pervading brown hue of the skin, gave a remarkable marbled appearance to the back of the body, shoulders, calves of the legs, &c. These white patches had only appeared within a year; they followed an eruption of blebs, accompanied with itching. Thirion declares that six months ago, the skin was white, and that it had only assumed the reddish-brown appearance it now presents since that time. The spots of lentigo only had existed since childhood.

CASE CLXI.—*Congenital partial leucopathia in a black.* Artaud informs us, that he had seen a mulatto, nineteen months old, who had a tuft of white hair on the top of the head, a little to the right; there was also in the centre of the sinciput another white tuft, two inches broad, and in the middle of the forehead, a white band running obliquely to the eyebrows, which were half white. Between the pectoral muscles and the umbilicus, there was a white star with seven cusps upon the skin; the right heel was white, and there was a white spot on the vagina, &c. (*Mem. sur les albinos*, Journ. de Physique, t. xxxv.)

CASE CLXII.—*Accidental general leucopathia in a black.* One of Colonel Filcomb's negroes, having been burnt in several parts of the body, in stirring a boiler of sugar, the new skin which was formed over the burnt parts became white, and the whiteness gradually spread over the other parts of the body, until he became as white as an European. The new skin was so tender as to blister when exposed to the sun. The master, astonished at this change in the colour of his negro, had him dressed like his white servants. (*Histoire des Voyages*, t. xv. p. 614.)

CASE CLXIII.—*Accidental partial leucopathia in a black.* Franck, born in Virginia, in 1758, forty years of age, of a robust constitution, and enjoying excellent health, cook to Colonel Barnes, had in her youth as black a skin as the most swarthy African; about twenty years ago, however, she remarked that the skin, in connection with the nails, began to whiten; the same change took place afterwards

around the mouth, and this phenomenon continued by degrees to spread over the body until the whole of the skin had partaken more or less in this singular change. Four-fifths of the surface of the body are now actually white, smooth, clear and transparent, and all that remains black is losing that colour by degrees; the neck and the back along the vertebral column are the parts which are darkest; the head, face, breast, abdomen, arms, legs, and thighs are almost entirely white; the private parts and axillæ are variegated black and white; where the skin of these parts is white, it is covered with white hairs, where black, it is beset with black hairs. The face and neck become inflamed if she is excited to anger or is under the influence of shame. When she has been long exposed to the heat of the fire, red spots appear on the parts which have become white. This woman has never suffered the least inconvenience from this change; no stoppage of the catamenia ever occurred, except during pregnancy; she has never had any disease of the skin, nor made use of any topical application, which could have accomplished the change which has taken place equally on the parts sheltered from the fire, as upon those exposed to it. Perspiration takes place most naturally, and as freely from the white as the black parts of the skin; a blister was applied to the arm but did not rise. *Philos. Trans.*, vol. 51.

CASE CLXIV.—*Accidental partial leucopathia in a white.* Charles Ferron, hackney coachman, sixty years of age, exhibited several spots on the skin as white as snow, and which are rather symmetrically disposed. On the groins they are broad, extend irregularly, and blend with each other. Three-fourths of the penis, and of the scrotum, the skin of the upper and inner parts of the thighs in contact with the scrotum, a portion of the outer aspects of both thighs, the lumbar and dorsal regions, and that of the linea alba, over an extent of surface twelve inches in length by about three in breadth, also present this snow white appearance, which forms a strong contrast with the natural brownish colour of the skin in other parts. In places where the skin is white the hairs are white also. On several parts in the neighbourhood of those which are blanched, small white spots are seen at the roots of the hairs; some of these are broader than others, and appear by spreading to have formed the larger white spots. Although this man has been engaged during thirty-five years in an occupation in which of course he has been subject to great exposure, he has never had any serious illness; neither has he ever laboured under skin disease of any kind; he is in short a very healthy subject. The blanching process began in the spring, at the age of forty-five, and advanced slowly. The spring and summer have always been the seasons most favourable to this change of colour, which took place without pruritus or pain. Various means have been had recourse to, but ineffectually, to restore the colour of the skin and stop the progress of the alteration. Since he attained the age of puberty he has had a considerable tuft of hair on the ridge of the nose. (*Gauthier*, op. cit., p. 76.)

#### NIGRITIES. [AUGMENTATION OF PIGMENT.]

1058. The skin of the European, white in childhood, of a brown hue in manhood among the inhabitants of the South, sometimes accidentally assumes upon some particular district, or over the whole surface of the body, a black hue, similar to that of the negro or mulatto (nigrities).

1059. Local nigrities is most frequently observed on the genital organs. It is not uncommon to see the scrotum and the skin of the penis of adults or full-grown men, almost entirely black, so as to form a strong contrast with that of the pubes, and of the upper parts of the thighs. Haller<sup>1</sup> met with a woman in whom the pubic region was as black as that of a negress.

The nipples of nurses while suckling, are very often of a deep black colour which disappears after weaning. The skin of the face may present a like phenomenon. A lady, says Lecat,<sup>2</sup> about thirty years of age, became pregnant; about the seventh month, the forehead assumed a dusky hue, of the colour of iron rust; by degrees the whole face became entirely black, except the eyes and the edges of the lips, which retained their natural colour. This hue was deeper on some

<sup>1</sup> Haller. *Element. Physiolog.*, t. v. p. 18.

<sup>2</sup> Lecat. *Traité de la peau humaine*. Amsterdam, 8vo., 1765, p. 136.



days than on others. This lady, being naturally of a very fair complexion, had the appearance of an alabaster figure with a black marble head. Her hair, too, was naturally exceedingly dark, but the part of it which grew from the dark-coloured skin appeared coarser, and filled with a blacker sap than the rest, to the height of about a line or two above its roots. She did not suffer from headache; the appetite was good; the face, after becoming black, was very tender to the touch; the black colour disappeared two days after her accouchement with a profuse perspiration, by which the sheets were stained black; the child was of the natural colour. In the following pregnancy, and even in a third, the same phenomenon reappeared in the course of the seventh month; in the eighth month it disappeared, but during the ninth this lady became subject to convulsions of which she had an attack each day.

1060. I have seen several cases in which the tongue became black; the colouring matter, of a bluish-black, is generally deposited on the edges of the organ, in small close spots, from whence it gradually extends over its upper surface. The tongue is otherwise perfectly healthy. It is necessary to distinguish these pigmentary discolorations from the artificial blackening, produced by food or medicine, and from those which the reaction of two substances, the one containing tannin, the other iron, might produce on being taken into the mouth at the same time, or shortly after each other.<sup>1</sup>

1061. *General congenital nigrities* has perhaps never been seen. A case is related<sup>2</sup> of a woman who, like her husband, was of the white race, being delivered of a black child, in consequence of the portrait of an Ethiopian having been accidentally before her eyes at the time this child was conceived. P. Albrecht<sup>3</sup> speaks of a woman who, at the latter end of her pregnancy, was much burned, and buried for a time under the ruins of a house, which had been on fire, and who a month after, gave birth to a child whose skin was as black as that of an Ethiopian. M. I. Geoffroy Saint Hilaire, who mentions these two cases, adds with reason that the first seems susceptible of another interpretation, and that the second is incredible.

1062. On the other hand the existence of accidental nigrities rests on well-established facts. M. Chomel<sup>4</sup> quotes a case of a very apathetic old soldier, whose skin, without any appreciable cause, became as black in some parts as that of a negro, and of a yellowish-brown in others. Goodwin<sup>5</sup> relates a case of an old maiden lady, whose complexion, up to the age of one and twenty, was of the ordinary whiteness, but who then gradually became as black as an African. M. Rostan<sup>6</sup> has published a case of a woman, seventy years of age, who became as black as a negress in a single night, after great mental agitation. Wells has also published a case of accidental nigrities.<sup>7</sup> I have myself met with two cases of this kind.

1063. This accidental blackening of the skin, more frequently seen in women than in men, and occasioned by a deposition of pigmentary matter on the outward surface of the dermis, must be distinguished from the more or less dark brown or yellowish hue, which the skin assumes in old age; nor must it be confounded either with the ecchymoses which appear in purpura, sometimes to a great extent, with the blackish-green tint which appears in certain forms of icterus, nor with the superficial blackness which the sulphuret of mercury produces, &c.

General nigrities differs from melasma, in this latter disease being accompanied with considerable desquamation of the skin.

1064. The black and partial discolorations of the skin, as well as the yellow tints it sometimes assumes during pregnancy, commonly disappear after delivery. General nigrities rarely disappears either spontaneously, or through the influence of therapeutic agents. Chlorine baths make the skin yellow, instead of whitening it.

<sup>1</sup> Rumsey (Nath.). Remarkable blackness of the tongue. (London Med. Gaz., vol. vii. p. 245.)

<sup>2</sup> I have not been able to find this remark in Hippocrates to whom it has been attributed. Hoyer (Acta medico-physic., t. iv. 381), quotes two analogous instances.

<sup>3</sup> Ephem. Nat. Cur. dec. ii. ann. 6 (1687). Obs. xii.

<sup>4</sup> Bulletin de la Faculté de Médecine de Paris, 1814, No. 6.

<sup>5</sup> Goodwin, cit. by Renaudin, Art. Décoloration, Dictionnaire des Sciences Médicales.

<sup>6</sup> Bulletin de la Faculté de Médecine, 1817, Nos. 9 and 10, t. iv. p. 524. Nouveau Journal de médecine, mai, 1819.

<sup>7</sup> Wells (W. B.). An account of a female of the white race of mankind, part of whose skin resembles that of a negro, 8vo.

CASE CLXV.—*General nigrities*. Renaud, a sailor, sixty-three years of age, was admitted into the hôpital de la Charité on the 28th of August, 1827. This man, whose parents were healthy, had never had more than two diseases of the skin: the small-pox at ten years of age, and scabies at seventeen. Being drafted into the military service, he bore the fatigues attached to it for sixteen years, without his health being in the least degree impaired. He was engaged in the Spanish and Flemish wars. In Flanders, he was attacked with intermittent fever, which lasted for a year. The skin became of a sallow-yellowish colour, as is generally the case after this disease; and notwithstanding the immense quantity of quinine which was administered, the cure was only effected by his return to his native country. Since this period, the skin had resumed its natural colour. After having obtained his discharge, this man married a woman who had always enjoyed good health, and who was of a strong constitution; he now indulged in eating a great deal, but never committed any excess in spirituous liquors. On the 7th of July last, he perceived that his skin, which had always been white, had assumed a darker appearance approaching to a yellow. This change began on the inner aspects of the extremities, and extended progressively over the whole surface except that of the face, which only presented the bronzed appearance occasioned by the heat of the sun. At the end of six weeks this dark colour had become general over the trunk and limbs. Renaud then perceived that small solid elevations of the same colour as the skin, were forming on the body, the itchiness and smarting of which were so violent as to disturb his sleep. These papulæ covered the shoulders, the upper parts of the chest, and the posterior aspects of the limbs, without extending over the belly or buttocks. This eruption lasted three weeks. Laceration of the papulæ from scratching was followed by the effusion of a small spot of blood, which coagulated, and formed a minute black and circular scab; this was readily removed, and left a white cicatrice a little depressed behind it. A fortnight after the appearance of these papulæ, a perspiration broke out over the whole body, which lasted for two whole weeks; far from relieving the patient, this only rendered the smarting and itching more violent. The skin from that time, has gone on acquiring more and more the appearance of that of a mulatto, becoming darker and darker every day. The skin of those parts which are least exposed to the air is of a bronze colour, exactly similar to that of mulattos. The face is much lighter than the rest of the body and of a reddish-yellow hue. The conjunctive and the sclerotic coats are of their usual whiteness; the nose, lips and cheeks are not deeper than the rest of the face; the lips are white as in elderly people. The external mucous membranes have generally their natural tint. The whole of the skin of the neck is bronzed, deepening gradually in colour from the upper to the lower part, and passing from a dark yellow to a black bronze colour; it is, however, lighter in front, where it is habitually exposed to the air. The chest, of a pure bronze colour somewhat deeper than the anterior part of the abdomen, is covered with small white circular cicatrices, from two-thirds of a line to a line in diameter, which are evidently consecutive to the papulæ of prurigo. On the skin of the back, which is of a dark brown, white lines or linear cicatrices are also seen, the results of the excoriations produced by scratching; the arms are of a darker brown than the chest, particularly on the outsides; they are of a deep yellow on the insides, and literally covered, particularly on the upper part, with an immense number of irregular cicatrices. The back of the hand is dark, but less so than the outside of the arm; the palm is nearly of the natural colour; the nails of both hands and feet are of a clear yellow; the colour deepens continually from the lower towards the upper part of the thighs, so that the posterior part of the pelvis is almost black. The skin is shining like that of negroes, and soft to the touch, without being moist from perspiration. The hair which grows on the outsides of the legs and arms, and is scantier than it was at the beginning of this affection, seems harsher and blacker, and to have acquired a disposition to curl; the hair of the head has become of a deep black; on the breast there are several white spots.

The pulsation of the heart, and the arterial pulse, are strong, regular, and slow; the radial arteries, which are very large, are tortuous. The veins of the legs have been for a long time very prominent. On the 30th of August a blister was applied to the left arm, which rose



in the ordinary manner. The external surface of the dermis was of a yellowish-red, and appeared to be the seat of the accidental discoloration of the skin. The epidermis did not differ from that of whites generally, except that its internal surface appeared in some points of a yellowish-white. The blister was kept open for four days. A new epidermis was then allowed to form on the surface, and the skin assumed very nearly the same appearance which it presents in whites, after the application of cantharides, the colouring matter having very probably been discharged with the serum and pus. 1st, 2d, and 3d of September, lotions of chloride of lime were applied, but produced no effect on the skin. From the 14th to the 20th, sulphureous water baths, and after the 20th, simple tepid baths were administered. On the 22d, the patient appeared less black; the backs of the hands resembled copper which had been long exposed to the air; the anterior parts of the neck, breast, and abdomen, the inner part of the extremities, and the other regions, which were of a deeper colour, changed from brown to bronze. Since this time the state of the skin has not undergone any change, and the principal functions have experienced no derangement.

Fourcroy (*Système des connaissances chimiques*, t. ix. p. 259), assures us that a negro, after having placed his foot in a solution of chlorine in water, and held it there for some time, drew it out bleached and almost white. He adds, that the skin did not resume its black hue for several days.

Beddoes (Considerations on the Medicinal Use of the Factitious Airs, &c.), having stated that he had made a similar experiment on the hands of a negro, I myself tried the effects of this agent in the case just related. A pint of water, saturated with chlorine, was poured into an arm-bath, and the right hand and forearm were immersed in it for twenty minutes. This bath occasioned slight smarting, and considerable redness of the skin. The parts immersed appeared less black when removed; the hairs of the forearm were yellowish and brittle. During the day the arm became red and very hot. Two days afterwards, this erythematous inflammation had subsided, but it was followed by slight desquamation, attended with this peculiarity, that the detachment of the epidermis was accompanied in some places with the removal of the colouring matter of the skin. I afterwards tried general chlorine baths, by which the skin was rendered yellowish, but was not restored to its natural colour.

CASE CLXVI.—*Nigrities after weaning and amenorrhœa, in a woman of a choleric disposition.* C \* \*, thirty years of age, a laundress, of a very violent disposition, born at Mezieres, of French and white parents, had several times suffered from nervous attacks, after fits of passion. After having suckled her infant a year, she weaned it in the month of May last, and made use of a variety of drinks to carry off the milk. Since that time she has continued weak; she entered the Hôpital de la Charité the first time with pains of the abdomen, which were treated with anodynes. She was admitted again on the 29th of August, 1834. She had menstruated for the first time at the age of nineteen, married, and became the mother of two children, but the catamenia had not appeared since her last confinement, upon which occasion she informed me that she had been very ill for six weeks.

The skin of this woman, who, in every other respect—in the form of her cranium, the colour of her hair, &c.—has the appearance of an European, was of a generally blackish hue, like that of a mulatto. She assured me that this change of colour had only taken place since the weaning of her last child, had occurred very suddenly after an attack of illness which she had then experienced, and had gone on increasing in intensity so long as she continued very ill. Since then it had diminished a little. The black colour is almost uniformly diffused over the whole surface of the body except under the knees where it ceases suddenly; the lower limbs are much less deeply tinged than the other regions; the colour is rather deeper on the outsides than on the insides of the extremities. It is darker over the joints in the sense of extension. The lips and lower eyelids are particularly black. On the left side of the lower lip there is a small irregular spot about the size of a sixpence, considerably lighter than the integuments around it. On the left arm, where a blister had been applied five months since, and kept open for twelve days, there is a spot which is much darker than the surrounding skin. The whole surface

of the skin is not of equal blackness; some places are of a much lighter shade than others. The conjunctivæ have undergone very little change of colour. This woman has blue eyes, and lank hair; her nails have never become either black or yellow. She says she has suffered lately from attacks of intermittent fever. She was affected with amenorrhœa accompanied with derangement of the digestive functions, characterized by loss of appetite, difficulty and slowness of digestion, but without either abdominal pains, thirst, or redness of the tongue. The heart beats regularly, the breathing is natural, the sleep is disturbed. I tried in vain to bring about a return of the catamenia by the application of leeches to the genital organs, and by strengthening the constitution with the use, alternately, of the tepid and sulphureous water bath. This very unmanageable and passionate woman quitted the hospital in almost the same state in which she had entered it, and without any appreciable alteration in the morbid colour of the skin.

## EPHELIS.

Vocab. *Ephelis*, *Freckle*.

1065. Following the example of Lorry, and of Peter and Joseph Frank, I have made use of the word *ephelis* in its literal acceptance, so well indicated by Blanchardus and Castelli, employing it to designate the brown spots produced by the action of the rays of the sun on the skin. They are often few in number, broad, irregular and of a deep brown, (*Ephelis umbrosa*, J. P. Frank,) sometimes small, circular and very numerous, and of a deep yellow, approaching to lentigo in form and colour (*Ephelis lentigo*, P. Frank). They always appear in the spring or during the heats of summer, upon the face, neck, upper part of the thorax, and hands, particularly among children and individuals who have a very fine skin. Our gentlewomen make use of veils to prevent these spots. Some carry their solicitude so far as to wash their hands and face in a mixture of white of egg and water; others, to restore the colour of the skin when covered with freckles, to its natural colour, bathe it with cream, whey, a variety of distilled and aromatic waters, &c. These marks generally disappear on the approach of winter.

1066. Dr. J. Davy<sup>1</sup> has made several experiments to ascertain the mode in which this discoloration of the skin occurs upon exposure to the rays of the sun. In order to determine the nature of the change which takes place in this case, and in seeking to discover the uses of the change itself, he has ascertained that among Europeans, when any part of the surface of the skin is exposed for the first time to the burning sun of hot climates, slight erythematous inflammation takes place: the epidermis is subsequently detached in large scales, and is replaced by a new one of a very light brown hue, but which becomes much darker after several successive desquamations. A similar change is frequently known to follow the inflammation produced by a blister. This alteration in the colour of the skin, nevertheless, often happens without any previous perceptible inflammation; and then occurs after long exposure to a strong diffused light. The change of colour does not take place in the epidermis, but is attached to the surface of the dermis, upon which a quantity of brown colouring matter is deposited. This substance is chemically the same as the black pigmentary matter of the eye, and like it, resists a low red heat, without decomposition. The effect of the change of colour which the skin undergoes, is to protect it against the farther action of the burning rays of the sun. The results of Dr. Davy's experiments on this point are in accordance with the conclusions which Sir E. Home<sup>2</sup> has drawn from his inquiries on the same subject. When the skin has once acquired the brown colour, exposure to the rays of the sun may still occasion some slight smarting and a trifling increase in the temperature, but desquamation does not generally take place. From analogy, the name of *ephelis ignealis* is given to the brown or yellow spots which are seen on the

<sup>1</sup> Transact. of the Med. Chir. Soc. of Edin., v. iii. p. 89. Extract in Arch. gén. de méd., t. xviii. p. 89.

<sup>2</sup> Home (Everard). Sur la couleur noire du réseau muqueux de la peau des nègres, considérée comme servant à la préserver de l'action trop vive des rayons solaires. Extrait. Archiv. génér. de méd., t. i. pp. 90-92. Phil. Trans., 1821.



inner parts of the legs and thighs of females who are in the habit of warming them over pans of lighted charcoal.

## LENTIGO.

Vocab. Art. *Freckle, Lentigo.*

1067. *Lentigo*,<sup>1</sup> more generally known under the name of *freckle*, is characterized by the presence of yellowish, not prominent, and circular-shaped spots. These occur both scattered and in clusters, especially on the face, breast and arms. The spots are of a lighter or darker yellow hue, and as has been said, do not rise above the level of the skin. Appearing from the period of infancy, without any appreciable cause, these spots are generally seen on persons with very light, or reddish brown, or bright red hair; they sometimes continue to an advanced period of life, but usually decline towards the age of puberty. The epidermis does not present any inequality over the stained parts. These spots are not accompanied either with tingling sensations or itchiness, but they abstract powerfully from the whiteness and brilliancy of the skin, which no topical application will restore. They sometimes disappear at indefinite periods, in consequence of the modifications produced by age in the structure or condition of the skin. The spots of *lentigo* differ from those of *ephelis*, in their permanence; the latter appear on the face, hands and other exposed parts of the body during summer, and disappear or become paler in the winter; the stains of *lentigo*, again, are lasting. Farther, *ephelis*, appears indiscriminately in all children, and in almost all adults who are exposed to the heat of the sun, while the spots of *lentigo* are more particularly observed in persons whose hair is red or very light, whose eyes are of a pale blue, and whose skin exhales a very unpleasant odour.

1068. When pieces of skin covered with these pigmentary spots are put to macerate, the colouring matter almost always remains firmly adherent to the dermis, when the epidermis has been detached from it.

*Lentigo* is never made the subject of medical treatment. "Pene ineptiæ sunt, curare varos et lentículas et ephelidas; sed eripi tamen feminis cura cultûs sui non potest."—Celsus. *Dere medicâ*, lib. vi., sect. v.

## CHLOASMA. LIVER-SPOT.

Vocab. Art. *Pityriasis versicolor, Maculæ hepaticæ.*

1069. *Chloasma* is characterized by one or more accidental spots or patches, from the size of a millet seed to that of the palm of the hand; they are dry, generally without pruritus, and of a pale or brownish-yellow colour; they are almost always developed on the trunk, sometimes on the face and neck, but very rarely on the extremities.

1070. *Symptoms.* The colour of the spots of *chloasma* may, in some cases, be compared to the pale yellow of the withered leaves of certain trees, in others to the deep yellow of rhubarb or saffron; in other instances, but very rarely, these spots are of so deep a colour that they approach the description of stain which I shall afterwards treat of, under the name of *melasma*. The form and size of these spots are subject to great variety: some are several inches in diameter, whilst others are scarcely a few lines long. Others, still smaller, of the size of the papulæ of lichen *simplex*, are generally scattered over the anterior parts of the chest and abdomen, and are to be distinguished by their yellowish or greenish colour. In some individuals, these spots, at first single, multiply, enlarge and unite into larger or smaller clusters, so as to give the skin a very remarkable appearance. A certain number of these maculæ, very analogous to those of *ephelis*, do not rise above the surface of the skin which surrounds them, and are not the seat of any apparent exfoliation. Spots of *chloasma* are more particularly observed among persons whose skins are fine and delicate, and among pregnant women (the *Maculæ gravidarum* of certain authors). The stained parts are at other times slightly pro-

minent; their surface becomes the seat of an itchiness which is increased by heat and exercise, or the use of strong liquors. The epidermis afterwards cracks over the surface of the spots, and is detached in small furfuraceous lamellæ (*chloasma pseudo-porrigo*, Frank; *pityriasis versicolor*, Willan); and even when these spots do not appear at all squamous to the eye, the altered epidermis may often be detached by scratching them with the nail or rubbing them with a dry cloth, and the true skin left exposed, which then appears impregnated or overlaid with colouring matter, of a greenish-yellow. The epidermis scales off with particular ease after several sulphureous water baths have been taken. When patients leave these baths, the spots, instead of presenting the ordinary saffron or yellow appearance, are of a reddish colour which bears some analogy to that of lichen *simplex*. Sometimes, also, during summer, or at the beginning of spring, the yellow spots of *chloasma* extend, become itchy, and acquire, temporarily, a fiery tint. I have observed this change more particularly among women who had one or more spots of *chloasma* between the breasts.

The duration of the spots of *chloasma* is very variable; they are most frequently evolved without any known cause, and generally last for several years, if not treated appropriately. The skin of females is more frequently affected with them than that of men; they are rarely seen among children. Women who are affected with them often observe that the colour becomes deeper at the period of menstruation; in this case the spots appear and disappear without any visible desquamation of the cuticle taking place. Several pathologists have designated under the name of *chloasma gravidarum* or *chloasma amenorrhæica*, similar spots which appear during pregnancy or on the suppression of the catamenia.

1071. Pieces of integument, covered with the spots of *chloasma*, have been left to become putrid in the open air, and in maceration; the epidermis, when detached from the former, did not remove the colouring matter; it remained on the external surface of the dermis, under the appearance of a brownish, blackish or grayish layer, which was easily removed with the back of the scalpel. The colouring matter of the pieces subjected to maceration, was divided between the epidermis and dermis, on the surface of which it appeared in the form of a blackish or grayish liquid matter, stagnant in the small furrows, and disposed in layers of unequal thickness. On the surface of the dermis there was observed besides, a band of a blackish colour, deeply situated, which could not be detached with the scalpel without implicating the tissue of the true skin.

1072. *Causes.*—These spots (*maculæ hepaticæ*) often appear in individuals otherwise in perfect health. Patients suffering from chronic affections of the stomach and lungs are also liable to them. In spite of the vulgar opinion which attributes these spots to disease of the liver, it is notorious that they rarely accompany affections of this organ.

The mode in which these spots of *chloasma* are produced is almost unknown; although a marked analogy between the colour of particular spots, and those which follow the application of blisters, may lead us to suppose that the former, as well as the latter, are preceded by a morbid accumulation of blood in the discoloured parts.

1073. *Diagnosis.*—Hepatic spots cannot be confounded with any other morbid discoloration of the skin; *ephelis* differs from them in situation, colour, and above all, in its cause; *lentigo* in its form, its continuance, its red colour, and its commonly accompanying hair of a similar tint. *Nævi*, of the colour of milk coffee, are, in the particular of colour, singularly like some spots of *chloasma*, but differ from these in other respects, inasmuch as they are congenital, lasting, and their surface is never either furfuraceous or itchy, like that of the patches of *chloasma*.

1074. *Treatment.*—The spots of *chloasma*, which often appear in women a few days after conception, frequently disappear at the end of the first month of pregnancy, along with the troublesome symptoms which announced this state; but they have been known to continue during the whole period of utero-gestation, and even for some time after delivery. In this last case, and whenever these spots exist independently of all other affections, they must be treated by sulphureous water-baths, administered every other day, a remedy under which they almost always disappear in the course of a fortnight, or

<sup>1</sup> Forestus. Obs. chir. lib. v. ob. iv: De lentigine et panno faicei.



of a month at the longest. This means is greatly preferable to various other remedies which have been recommended, such as acid washes, the application to the parts affected of embrocations and liniments of camphor, borax, the lauro-cerasus, &c. I ought to remark that, after the administration of a sulphureous bath, the spots of chloasma often appear of a very deep red, which lasts during several hours. I have seen liver spots vanish after an attack of measles. When the cure has been effected by sulphureous baths, or any other means, it is not uncommon for chloasma to reappear the following year, particularly in the spring.

Chloasma is in general easily subdued by the use of sulphureous baths. Nevertheless, I have seen several cases of a variety of this affection, which is almost incurable, but which is happily of no real consequence. Almost the whole surface of the body was covered with large spots of a dirty yellow colour, neither itchy nor furfureaceous, some of which it would have been impossible to cover with the palms of both hands joined together. In these rare cases, small streaks only, or isolated points of healthy skin, were seen between the spots. Several of the patients thus affected, had been sent to various watering-places, but this without avail in so far as the affection of the skin was concerned, and almost always with temporary injury to their general health. These yellow discolorations of the skin resemble meladermia in their rebelliousness to treatment and their continuance.

When patches of chloasma exist at the same time with an affection of any of the internal organs, as of the intestines, the uterus, &c.; or, when they appear after the cure, or decline of the more active symptoms of these affections, many practitioners object to treating them by the sulphureous bath, lest any disease which should occur accidentally afterwards might be attributed to their cure. This alarm, however, though it may not always be prudent to oppose it, does not appear to be justified by any well-authenticated case.

#### Historical Notices and particular Cases.

\* 1075. Hippocrates has designated under the name of εφελιδες not only the spots which are produced by the heat of the sun, but those also which sometimes appear on the faces of pregnant women.<sup>1</sup> Sennertus<sup>2</sup> has given a very good description of liver spots, and has quoted and praised that of Solenander. At various later periods, these spots have been described by Lorry<sup>3</sup> under the name of *macula biliosa*; by Willan and Bateman, under that of *pityriasis versicolor*; by M. Alibert under that of *ephelides hepaticques*, and by P. Frank, under the title of chloasma. Some cases of this disease are to be found in the medical journals.<sup>4</sup>

CASE CLXVII.—*Liver spots on different parts of the body, cured by the use of sulphureous baths.* A girl, eighteen years of age, of a bilious and sanguine temperament, had observed, for the space of about a year, some brownish-yellow coloured spots on almost all parts of her body. When I saw them, these spots occupied more particularly the anterior and posterior parts of the trunk. These were of different forms and sizes, extending in some places to between four and five inches in diameter. The greatest number of them were accompanied with no morbid sensation. Others were itchy, and their surfaces appeared covered in parts with small furfureaceous squamæ. A careful examination of the thorax and abdomen detected no organic lesion in either of these cavities; the general health of the girl was good. The spots disappeared after the use of five and twenty sulphureous baths.

CASE CLXVIII.—*Spots of chloasma on the trunk and limbs.* D\*\*\*, five and twenty years of age, was attacked with chloasma in the month of February, 1824. The spots first showed themselves on the neck, and from that extended over the other regions of the body. On the 7th of May, 1826, the whole posterior part of the trunk was

covered with brownish-yellow spots, running into each other; they were all of the same colour except in some few places in front of the neck and chest, and especially between the mammæ where the skin appeared whitish, and from which desquamation had taken place. The spots were fewer in number on the belly, but increased again on the thighs where they were very deep in colour and confluent. There were none on the legs and very few on the upper extremities, except above the elbow where they were more numerous. The face was free from them, with the exception of two on the right side of the forehead. On all the parts affected, this young woman experienced great itchiness and a tingling sensation which were excessive when she was not in motion. Her general health was good and all the functions regular.

These spots disappeared in the course of six weeks after the use of thirty-three sulphureous baths, without any implication of the general health.

CASE CLXIX.—*Spots of chloasma on the trunk and scrotum.* M\*\*\*, forty years of age of a sanguine temperament, consulted me on the 11th of June, 1821, for chloasma which appeared in several parts of the body. On the skin of the neck and shoulders, and on the posterior and anterior parts of the trunk, there were many superficial spots of a brownish-yellow hue which did not change colour on pressure; they had a fimbriated appearance in some places, in others, by being disposed in small circular spots, they gave the skin a marbled appearance. Their edges were well defined, not shaded off into the surrounding skin, and so close together on the upper part of the trunk, that it was scarcely possible to distinguish the natural colour of the skin; they became fewer in number on the lower part, so that the hypogastrium and loins were almost entirely free from them. In the spaces between these spots the skin retained its natural colour. Any thing that accelerated the circulation, and produced an increase of heat or perspiration, was sure to create a violent itchiness in the spots of chloasma. The patient could not then be prevented from scratching himself violently, and the spots were soon afterwards affected with furfureaceous desquamation. The skin of the scrotum and of the upper and inner parts of the thighs was of a yellowish-brown hue, similar to that of the other spots, from which, indeed, it did not differ in outward appearance, save in being habitually affected with a pretty abundant furfureaceous desquamation.

During the heats of summer these spots became exceedingly itchy. During the past year, a great number of them had disappeared after some sulphureous water douches which the patient had taken at Aix. After the use of forty sulphureous baths they disappeared entirely without there being any necessity for having recourse to other forms of treatment.

#### MELASMA.

#### Vocab. Art. *Melasma, Pityriasis nigra.*

1076. Under the title of *melasma* I designate an accidental and temporary blackish discoloration of the skin, and particularly of the epidermis occurring in one or more parts of the body, and almost always followed by furfureaceous desquamation. This disease has been observed by Willan in children born in the Indies and brought to England. Lorry<sup>5</sup> and M. Alibert describe it as a peculiar species of discoloration of the skin, under the name of *ephelide scorbutique*. This morbid alteration in the colour of the skin, so frequently met with in those affected with pellagra, appeared among a certain number of individuals of both sexes and of all ages in the epidemic of Paris of 1828.

The variety of this affection observed by Willan in children (*pityriasis nigra*, Willan), began by a partial eruption of papulæ, and ended in slight furfureaceous desquamation from, and blackish discoloration of, the skin. This disease sometimes affects only the half of a limb, as the arm or the leg, sometimes only the fingers or the

<sup>5</sup> Alia macularum species datur quæ, quasi pulvere nigro cutis foret conspersa, eam deturpant, et sæpius diarrhœa solvuntur, aut vacatione quavis, e. g., sudoribus; tales in muliere gravidâ vidi quæ partu solutæ sunt, cum per dolorum atrociam sudoribus illa deflueret. Lorry. De morbis cutaneis—Introductio. p. 91.

<sup>1</sup> "Quæ utero gerant in facie maculam habent, quam εφελιδες vocant." Hippoc. Op. περί ἀφροδισίων—Περὶ γυναικείων.

<sup>2</sup> Sennert. Opera, t. iii. lib. v. part. iii. sect. i. cap. vii. De maculis a Germanicis epaticis dictis.

<sup>3</sup> Lorry. De morbis cutaneis, introductio. p. 91.

<sup>4</sup> Obs. de pityriasis versicolor. Journ. Hebdom., t. viii. p. 45.—Obs. d'Ephélides hépatiques guéries par la méthode ectrotique. Journ. Hebdom., t. iv. p. 264.—Avantages du borax. Journ. de chim. médic., t. ii. p. 591.



toes. M. Alibert<sup>1</sup> relates three cases, one of which is a very remarkable instance of melasma: the skin of a beggar became as black as that of a chimney sweeper, and the surface in many parts rough and granular. A similar alteration of the skin has occasionally been observed in cases of pellagra (see Pellagra). In the epidemic of Paris, in 1828, the epidermis became thickened in a great number of cases, principally at the extremities of the fingers and toes, and the skin of these parts, as also that of the chest, and abdomen particularly, frequently assumed a blackish hue, as though it had been coloured with soot. This colour sometimes extended regularly over a larger or smaller portion of the body; or it appeared in the form of isolated patches, at different distances from each other. The epidermis thus discoloured, became dry and rough, and then cracked and was detached from the skin, which appeared of the natural colour beneath it, and was speedily covered afresh with healthy cuticle.<sup>2</sup>

There is a morbid discoloration of the skin observed in South America, which may be assimilated to melasma (see Pinta).

CASE CLXX.—*Melasma observed during the epidemic of Paris, in an individual in whom no symptoms of this epidemic had appeared.* Gerard, three and thirty years of age, a sawyer, entered the Hôpital Saint Antoine the 27th of September, 1828. Born of healthy parents, his father having been fair, his mother dark, this man was of ordinary complexion, the skin naturally rather brown, and the hair black. In the month of July last he experienced great lassitude, and complained of pains in his limbs, which were independent of the fatigues of his occupation. These pains were accompanied with dry cough and some oppression of chest. Leeches were applied to the epigastrium, and demulcent drinks prescribed. He also experienced great itchiness over the trunk and limbs. He was relieved by bleeding; but the oppression of chest not having entirely subsided, he entered the hospital. We were struck with the force and irregularity of the beat of the heart; the face was swollen. The patient was bled twice, after which the palpitation and puffiness of the face subsided.

On the day of his entrance, all were struck on uncovering the patient with the black hue of the skin of the belly and trunk; the patient seemed equally astonished himself, and assured us that the skin, though always naturally brown, was very different from the state in which it then appeared. This hue continued. On the 30th of September, no morbid discoloration had taken place on the skin of the face; the skin of the neck and of the anterior and posterior parts of the thorax, was brown and smooth like that of a mulatto. The anterior part of the abdomen presented a very peculiar appearance: the epidermis was detached in small plates about the size of a silver threepence; these plates were positively black both on their internal and external surface, but appeared much blacker on the skin than after they were detached; when examined between the eye and the light, they were of a grayish hue. On the parts from which the cuticular lamellæ were ready to be detached, the skin was already provided with a new epidermis, not nearly so black as the preceding one, and almost of the same colour as the skin of a mulatto. The skin of the scrotum and upper parts of the thighs, was as black as that of a negro, but was not smooth and shining as it is in blacks; desquamation was in fact going on in several places from its surface. After the coloured epidermis had fallen off, the skin assumed a brown hue. The patient left the hospital in a fortnight from the time of his entrance; he now suffered no inconvenience from palpitations, and after taking a few tepid baths the skin resumed its natural colour.

#### PIGMENTARY NÆVI.

1077. Under the title of *nævi*<sup>3</sup> are designated those congenital alterations of the colour or texture of the skin, which are generally permanent and confined to one part of the body. Although these

<sup>1</sup> Précis théor. et prat. sur les malad. de la peau, t. i. p. 400. Plate xxvii. bis of his folio work gives a faithful representation of this alteration.

<sup>2</sup> Kuhn. Epidémie régnante à Paris. Bull. des sc. méd. de Férussac, t. v. p. 252.

<sup>3</sup> Haller. Element. physiolog., 4to. t. viii. p. 129.—Jacquin (Ch.). Mémoire et observations sur les marques ou taches de naissance. (Journal général de médecine, de chirurgie, etc., tom. xliii. 8vo. Paris, 1812.)

nævi are of very various appearance, they may all be classed under three heads: the one comprises congenital anomalies of the rete mucosum, in which the colouring matter of the skin is contained; another vascular formations and hypertrophies; and a third various congenital tumours formed by the cutaneous and subcutaneous tissues hypertrophied. These two last species of nævi will be treated of hereafter.

1078. Congenital affections of the pigmentary membrane, which were generally spoken of by the ancients under the name of *spili*, present an endless variety in regard to number, form, size, colour, &c. Those yellowish congenital spots which in colour are so singularly like the patches of chloasma, but which differ from them in generally resisting the curative means to which they yield, may be designated under the name of *nævus chloasma*. A young woman, twenty-eight years of age, had a slightly oval-shaped spot, of a brownish-yellow colour, and nearly of the size of a five-shilling piece, on the right side of the fore part of the neck; this spot was exactly like those stains which I have designated under the name of *chloasma*. In conformity with the vulgar notion, this young woman attributed the existence of this spot to a longing which her mother had had during her pregnancy for *café au lait*. These congenital spots are also sometimes seen of a lighter or darker brown or black colour (*nævus niger*). A young man had on the inner and upper part of the right thigh, a black congenital spot, not prominent, of about two inches in diameter, the edges of which were irregular and as if scalloped; the hairs which grew on the surface of this spot, presented a slight enlargement towards their roots.

Gaultier<sup>4</sup> mentions congenital and bronzed spots of the skin. A man, forty years of age, calling himself Joseph Galart, born in Switzerland, attracted the attention of the curious, by exhibiting himself under the name of the *living angel*. He presented the following appearance: the skin of the whole posterior part of the trunk, from the nape of the neck to the loins, is of a bronze colour. This colour extends over the shoulders and the sides of the neck. This part is covered with hairs, of great fineness and growing very thick; the skin of the rest of the body is of the usual whiteness. Those parts are darkest which are most thickly covered with hair; on the back there is a space of an inch in diameter, which has preserved its whiteness, and where the hairs are fewer in number, darker at their bases, and surrounded by a very small black circle; the hair is thinner on the sides of the neck; there are a great many individual hairs surrounded by circles of colouring matter; but there are also many which present nothing of this coloured areola. In some places the general dark colour of the skin blends with the areola surrounding the roots of the hair, so that one uniform brown surface results. In many places the brown colour changes into black. The pupil of the eye is very black, the iris brown. This man is of a very unstable character, extremely undecided in all his undertakings; he has a lively but silly expression of countenance. A distinct smell of mice, with a mixture of a garlicky odour, is emitted from those parts where the excessive secretion of the colouring matter takes place. In these places the heat is also greater than natural. To conclude, I recollect having seen at the *Bureau Central des Hôpitaux*, a young man, whose eyelids, and adjacent parts of the cheeks, were of a bluish tint, similar to that which is produced on the skin by the explosion of gunpowder. Still more recently, I met, among the out-patients of the Hôpital de la Charité, with a man, on the outer side of whose legs there was a congenital spot, which at first sight might have been taken for an ecchymosis. A child was also brought thither to me, who had a grayish-black spot in the region of the loins, the colour of which resembled that which is produced by spreading a thin stratum of mercurial ointment upon the skin.

1079. *Pigmentary nævi* are sometimes covered with hair, the strength and colour of which are very different; it is, however, most generally brown and short. Some of these congenital pigmentary spots fade in intensity of colour after birth; others continue through life, without spreading either in breadth or in depth. These congenital alterations are removable with the knife, the use of caustics, and the repeated application of certain irritating solutions which inflame the skin; but

<sup>4</sup> Gaultier (G. A.). Recherches sur l'org. de la peau, etc., p. 66, 8vo. Paris, 809.



these various means leave cicatrices almost as disagreeable in appearance as the spots themselves.

## BLUE COLOUR OF THE SKIN.

1080. Billard<sup>1</sup> has published a very extraordinary case of *blue discoloration* of the skin, which ought probably to be assimilated with the *blue sweats* that have been described. "Victorine Rufland, sixteen years old, and of a good height for her years, presented on the neck, face, and upper part of the chest, a beautiful blue tint of the skin, principally spread over the forehead, the *alæ nasi*, and round about the mouth. When these parts were rubbed with a white towel, the blue colouring matter was detached from the integument, and stained the towel, leaving the skin white. This girl's lips were red; she was pretty stout; the pulse was regular and natural; the strength and appetite like those of a person in health. The only morbid symptom was a dry cough, but without mucous rattle, and without any deficiency of sound of the chest, and without alteration of the natural beat of the heart; the catamenia had never failed. She had been engaged as a laundress for the last two years; from the time she began this occupation, she had perceived a blueness round her eyes, which disappeared, however, on going into the air. This phenomenon reappeared, more particularly when the irons were heated by a very bright charcoal fire, or when she worked in a hot and confined place. This discoloration, however, made no progress until the month of May last, when the whole forehead and face became so blue, as to attract the attention of those who met the patient. The dry cough, of which I spoke, came on; the catamenia became more abundant than usual, and she was seized with spitting and afterwards with vomiting of blood: still the regularity of the catamenia was never interrupted. The patient was bled several times, and had a blister applied to the arm, but all without any improvement. When I first saw this girl, I looked upon her as affected with *cyanosis*, depending upon organic disease of the heart; but as the colouring matter was secreted on the surface of the skin, which was left colourless when it was wiped off, I soon came to the conclusion that the cutaneous secretion only was diseased. This diagnosis established, I now felt myself embarrassed as to the indications to be fulfilled. Still I ventured to advise medicines which, by their direct action on the skin, might perhaps bring about a favourable modification in its functions. I therefore prescribed six grains of sublimed sulphur, and a pint of decoction of sarsaparilla made with half an ounce of the root every day. Far from being useful, this course, which was continued for twelve days, only occasioned profuse perspiration, a material diminution in the quantity of urine excreted, and a considerable increase of the blue discoloration. The forehead, face, neck, breast and belly now became shaded with azure blue, which spread like clouds, and appeared deeper or paler according as the subcutaneous circulation was accelerated or retarded; when, for example, the patient should have blushed, the face became *blue* instead of *red*. The changes exhibited were positively like the sudden transitions from one shade to another, presented by the chameleon. It is proper to observe that the face and forepart of the trunk, the shoulders, the arms, and a portion of the thighs, were alone coloured; the posterior part of the trunk, the axillæ, and the calves of the legs were in their natural state. The linen of the patient was stained blue. The sclerotic coats of the eyes, the nails, the skin of the head, and the external ear preserved their usual colour. The mucous membrane of the mouth was a little pale, the tongue almost always loaded. No febrile symptoms appeared. I saw the patient again at the distance of a fortnight from the time of my first visit; the different parts of the body which I have described were then of a deep blue colour. The cough was more violent; there was, however, no fever; but for six days the urine had been scanty, and for the last three, the patient had not passed a single drop. She did not, however, experience any of the inconveniences that usually accompany a retention of urine, such as distension of the abdomen, pain in the hypogastric region, swelling of the legs, &c. From the absence of these symptoms, it was easy to

perceive that if the patient did not make water, it was only because there was none secreted; on the other hand, the blue colouring matter had become more abundant, and profuse perspirations took place each night. Thus the skin seemed to supply the place or to perform the function of the kidney. Spitting of blood had occurred some days previously, for which she had again been bled. The blood did not present any peculiarity of appearance. By means of a little oil, I obtained a considerable quantity of the blue colouring matter, which I had only been able to collect with great difficulty, and in small quantity by using plain water or vinegar and water. I sent it to M. Cadet, the distinguished chemist, who, from several experiments, concluded that this blue matter did not partake of the properties of the *cyanourine*, which M. Braconnet found in the blue urine of a patient, and that it was not composed of cyanogen, neither was it one of its compounds with iron.

Having found that an alkaline solution was the most innocent of all the reagents capable of neutralizing this colouring matter, I prescribed the bicarbonate of soda in an infusion of orange leaves, in doses of six grains a day, then of twelve, and finally of eighteen, progressively. At the end of twelve days, the skin of the trunk and limbs had become quite white; a light blue tint only remained round the eyes, about the *alæ nasi*, and over the forehead; the urine had become more copious, and was passed with greater ease, and the perspirations had diminished in quantity. During the following month the blue colour continued to diminish. In the whole of this time the patient had taken an ounce of bicarbonate of soda; the urine, which had previously been very acid, became in nowise alkaline; the perspiration was less acid than usual. This patient is at present in a very satisfactory state; the face is only slightly discoloured; but this colour increases with exposure to heat, any agitation of mind, fatigue of body, and towards the time that the catamenia appear. At this period, too, the cough increases, and she spits and vomits a certain quantity of blood, as in hæmatemesis. She has been bled in the arm; and the blood subjected to chemical analysis, presented no peculiar feature. The patient has nevertheless vomited blood, which contained a sufficiency of blue colouring matter to stain the sides of the vessel. She says, also, that in bleeding from the nose, she has seen blue drops among the drops of blood. Unfortunately, these matters were not preserved.

## YELLOW COLOUR OF THE SKIN.

1081. Morbid *yellowish* tints of the skin occur much more frequently than the preceding ones, and are almost always connected with serious diseases, of which, indeed, they generally constitute an unimportant symptom; it will be enough to mention these very briefly.

Icterus is the most common of these discolorations; although depending, in a great number of cases, on disease of the liver, and mechanical obstacles to the proper course of the bile, yet it sometimes exists without any apparent lesion of the biliary ducts, of the liver itself, or of any other organ which might affect the passage of the bile into the intestines (*icterus spasmodicus*, &c.). The discoloration in icterus varies from a pale lemon colour to a greenish-yellow, to a dark or brownish-yellow, and even to a green. This discoloration, more or less general, and always deeper in some parts than in others, appears at first on the conjunctivæ, the temples, the forehead, round the mouth, on the hands, breast, &c. The superior surface of the tongue seldom becomes yellow, but this tint is often observed on the inferior surface. The urine that is passed is of a deep yellow, and stains linen of a saffron hue. This yellow tint of the skin in icterus diminishes sensibly after death.

The kind of icterus to which new-born infants are subject<sup>1</sup> seems to differ essentially from common jaundice. Two or three days after birth, when the child is still very red, a yellowish shade is perceived over the skin, very light at first, but which increases by degrees. Instead of becoming white under the pressure of the finger, the skin assumes a yellow tint, and returns to the red colour when pressure is discontinued; at a later period the skin becomes very distinctly yellow.

<sup>1</sup> Billard [C.]. Mém. sur un cas particulier de cyanopathie cutanée ou coloration bleue de la peau, causée par une altération de la transpiration. [Arch. génér. de méd., t. xxvi. p. 453.]—Gazette méd. Paris, 1831, p. 399.

<sup>1</sup> Billard, op. cit., p. 643.



The *yellowish appearance* of the skin in the yellow fever, seems to depend, according to Desmoulins,<sup>1</sup> upon a kind of bloody effusion, or rather upon a very slight and diffuse ecchymosis of the skin and subcutaneous cellular tissue.

A *yellow tint* often appears in cases in which pus is absorbed into the system, even when the liver is not affected.

A similar *yellow tint* is sometimes seen in cases of pneumonia of a bad description.

The skin assumes a *straw-coloured tint* in intermitting fevers of long duration, and presents an earthy and yellowish hue in the cancerous diathesis.

#### ARTIFICIAL DISCOLORATIONS OF THE SKIN.

1082. Independently of the various morbid discolorations of the skin, which I have either just described or mentioned, there are others which are produced artificially, either by the direct introduction of certain colouring matters into the tissue of the skin (*tattooing, the black or blue discoloration occasioned by the explosion of gunpowder, &c.*), or by the introduction into the system of certain substances, which give the exterior of the body a peculiar adventitious colour (*the slate colour produced by the internal use of nitrate of silver*).

#### *Slate colour of the Skin produced by the internal use of Nitrate of Silver.*

1083. The nitrate of silver, which has now for a considerable number of years been employed internally in the treatment of various nervous diseases and more particularly of epilepsy, sometimes produces a slate colour of the skin, something similar to that of the mulatto, and one which occasionally becomes even nearly black.

1084. This alteration of the pigment appears to have been observed for the first time by Swediaur.

A Protestant clergyman, says he, of the neighbourhood of Hamburg, affected with obstruction of the liver, took, by the advice of an empiric, a solution of nitrate of silver. Having continued the use of this remedy for several months, the skin insensibly changed its colour, and became at last almost *entirely black*. This colour lasted for several years, and then began to diminish.<sup>2</sup> J. A. Albers, of Bremen, in 1801, prescribed nitrate of silver to a woman, thirty years of age, subject to epilepsy. This woman being much relieved by this remedy, continued to use it for three years and a half. Towards the end of the last year, being pregnant, the skin, particularly of the face, neck, and hands, became of a bluish colour; the sclerotic coats were also coloured in the same manner. The blue tint of the integuments was afterwards observed to increase on the approach of the menstrual periods; the colour of the blood was quite natural; the health of this woman was in no way affected; notwithstanding the application of different remedies, the skin continued to retain its deep blue colour.<sup>3</sup> Struck by the singularity of this phenomenon, Albers addressed himself to other practitioners, inquiring if they had observed any thing of the kind. Reimar, of Hamburg, wrote to tell him that he had seen two cases. Professor Rudolphi informed him that similar results had been observed by a physician in Griefeswalde. Doctor Schleiden, and Doctor Chauffepié, of Hamburg, sent the particulars of three new cases of the discoloration of the integuments in question. Doctor Roget, of London, having prescribed nitrate of silver to a young lady affected with epilepsy, and continued it for four or five months, perceived, some time after the use of the medicine had been discontinued, that the tongue and fauces had assumed a blackish-brown hue. At the end of some months a dusky-coloured circle appeared round the eyes, and the same tint spread successively over different parts of the body. This alteration of colour was permanent; it underwent no change at the time of menstruation.<sup>4</sup> Three similar cases have been detailed by M. Butini,<sup>5</sup> in his *Dissertation on the internal use of the preparations of*

*silver*. Professor Sementini has mentioned this change in the colour of the skin, in a work on the same subject. M. Planché,<sup>6</sup> in an analysis of this work, relates that in the year 1817, he saw a woman, seventy years of age, in Guy's Hospital, London, whose whole body was of a deep violet or livid colour, the effect of a course of nitrate of silver. I have myself observed this change in the colour of the skin in four persons subject to epilepsy who had been treated with the nitrate of silver.

C \* \* \*, formerly a soldier, twenty-nine years of age, entered the hospital of St. Louis, in the month of January, 1816, labouring under epilepsy. At this period the fits were violent and frequent. Since 1811, they had occurred in the most unequivocal form, after a shock which C \* \* \* had received at the battle of Wagram, where he was struck down senseless by a cannon ball, which tore away his knapsack from his back. It is very possible, however, that the origin of this disease might date from an earlier period, as the patient had for several years experienced a constant pain in the frontal and supra-orbital region, which he compared to the vibrations of the arm of a balance within his head. Shortly after his entrance into the hospital of St. Louis, nitrate of silver was prescribed for him. The dose, consisting of half a grain, at first, was progressively increased to eight grains a day. C \* \* \* took the shower bath at the same time, and the head was kept constantly bathed with cold water. The use of the nitrate of silver, interrupted from time to time, was continued for about three years. The fits became less frequent and not so violent, but did not entirely disappear. The digestion of the patient became exceedingly bad, and for a year there were unequivocal symptoms of gastro-intestinal inflammation. The tongue was constantly dry and loaded. Some months after he had commenced taking the nitrate of silver internally, C \* \* \* perceived that his skin had assumed a bronze hue. At the end of the course which it was considered necessary he should undergo, this morbid discoloration had increased to such an extent, that at first sight the patient was always taken for a mulatto. The coppery hue has always been deeper on the face than on any other part of the body. For several years it has gradually decreased, and the patient assures us that now (March 8th, 1827) the colour is not half so dark as it was in 1819 and 1820. It has remained deeper on the face and body than elsewhere, and the skin now presents a livid appearance similar to that of workers in copper. This hue is not so apparent on the legs and thighs, hands, and forearms. The conjunctiva is bright and of a very light coppery yellow; the mucous membranes of the lips and penis are sallow, the nails and hair have not experienced any change. Two or three small cicatrices have remained white, and have not participated in the general change of colour of the skin.

1085. I have seen two other persons affected with epilepsy who had been unsuccessfully treated with the nitrate of silver, whose skin also assumed this bronzed appearance. In one of them, R \* \* \*, this morbid discoloration was very dark, particularly on the face and hands; it was less so on the parts which are not constantly exposed to the light and air. This patient had several cicatrices which have acquired the same hue as the skin. The mucous membrane of the tongue, and the conjunctiva, are changed in the same manner as the integuments; the nails and hair have not undergone any alteration.

1086. M. Lelut has ascertained in two cases that the mucous membrane of the stomach and intestines presented a similar hue to that of the skin; he gives the following summary of his observations:<sup>7</sup>

1st. The discoloration has not extended to the osseous, the muscular nor the serous tissues, nor to the substance of the encephalon, of the liver, &c. The mucous membrane of the lungs seemed also to have escaped it. Perhaps some gray spots on the inner membrane of the aorta, were the effects of the medicine.

2d. The skin, and the mucous membrane of the digestive organs, were the only tissues which were evidently affected. The corion is the special seat of the discoloration; through the whole extent of the two integuments, this alone is uniformly discoloured. The epidermis and corpus mucosum, do not necessarily participate in this discoloration, as they were only affected in the hands and face; and as in the

<sup>1</sup> Desmoulins. In Journ. de physiol. exper. Juillet, 1823.

<sup>2</sup> Fourcroy. Médecine éclairée, t. p. 342.

<sup>3</sup> Med. Chir. Trans., t. vii. p. 284.

<sup>5</sup> Butini. De usu interno, præpar. argent. Genevæ, 1815.

<sup>4</sup> Ibid., p. 290.

<sup>6</sup> Planché. Journ. de Pharm., février, 1822.

<sup>7</sup> Coloration bronzée des tégumens chez un épileptique, produite par l'usage interne du nitrate d'argent. [Journal Hebdomadaire de médecine, t. vi. p. 305.]



sub-diaphragmatic portion of the mucous membrane of the digestive organs, there is neither epidermis nor corpus mucosum.

3d. The action of the air, and that of the light and heat of the sun, are not necessary conditions of this discoloration, as the mucous membrane of the digestive organs was bronzed through its whole extent. They seem, nevertheless, to favour the development of the preternatural hue, since it was much deeper on the face and hands than elsewhere, and as it was only over these parts that the two epidermic layers were affected.

4th. The colour which the internal use of nitrate of silver gives to the integuments, is influenced in its intensity, as well as the natural colour of the skin, by the state of the circulation, and the other vital actions; in fact, after these actions have ceased, it loses half its intensity.

1087. Mr. Brande<sup>1</sup> assures us that he found oxide of silver in the skin and other organs, in a case in which all the tissues were said to have acquired a livid hue.

1088. The change caused by the nitrate of silver in the colour of the skin, cannot be confounded with any other alteration in the pigimentary matter; it is even very distinct from the black discoloration produced on the integuments by the action of lunar caustic.

1089. The slate colour of the skin, produced by the continued action of nitrate of silver, has not as yet yielded to any of the means employed with a view to remove it. It generally fades in intensity after lasting for some years; but I do not know whether it ever entirely disappears. Perhaps stimulating baths might aid in removing the morbid discoloration in question. Mr. Badeley<sup>2</sup> found that the inflamed skin resumed its natural colour after the application of a blister. M. Lombard,<sup>3</sup> after making a number of experiments on the administration of nitrate of silver internally, in cases of epilepsy and other nervous diseases, thinks it advisable, when the state of the patient admits of the practice, to suspend the use of the remedy from time to time, in order to prevent the slaty discoloration of the integuments from taking place.

CASE CLXXI.—*Slate-colour of the skin and of the mucous membrane of the stomach and intestines, produced by nitrate of silver.*—Jacques-Auguste, twenty-eight years of age, subject to epilepsy, after having undergone a course of nitrate silver of about thirteen months' duration, observed, some time afterwards (in 1822), slate-coloured patches forming on different parts of his skin, and extending progressively over the whole of his body. Having been received into the Bicêtre, this man died there on the 18th of April, 1827. On opening the body, three cancerous tumours, with destruction of the cerebral convolutions in each of the lobes of the left hemisphere of the brain, were discovered as probable causes of death. A similar tumour was also found in the anterior lobe of the right cerebral hemisphere, and pleuro-pneumonia of both lungs. M. Lelut examined the integuments with much care, and ascertained the following facts: All the external integument was of a gray slate-colour, of moderate intensity. This hue, which was nearly the same in all parts of the skin, did not prevent the vascular colour of the cheeks from being distinguished. The edges of the lips, their internal surface, the inside of the cheeks, and both sides of the tongue, presented an exactly similar hue; the internal surface of the whole alimentary canal was of the same colour as the skin, and the upper opening of the gastro-pulmonary membrane. In the stomach this tint was extremely deep; it was not mixed with any violet-coloured marblings, depending on vascular patches or striæ; it was uniform over the whole extent of the viscera. In both the small and great intestines it was a little clearer, but still very appreciable; it was uniform as in the stomach, and slight traces only of vascular ramifications were discovered in the whole extent of the alimentary canal. Before being subjected to the action of boiling water, the epidermis generally, and the epithelium of the lips and tongue, were exactly similar to the same tissues in individuals whose skin has not been coloured with the nitrate of silver. The colour, both of the outer and inner tegument, resided in the corion, and did

not extend beyond it to the subcutaneous cellular membrane. After having been boiled in water, the cuticle and epithelium, both in their deeper and more superficial component parts (corpus mucosum vel reticulaire, and cuticle, properly so called), were perfectly colourless and white. The corion of the skin, and of the mucous membrane, alone preserved their slate-colour. The mucous membranes of the alimentary passages, freed from their epithelium, and the mucous layer supplied by the mucus they secrete, preserved the slate colour which they presented at first, after being boiled in water, another proof that the seat of this peculiar tint was the corion. The cellular and adipose cellular membrane, the muscles, tendons, aponeuroses, nerves, vessels, and bones, in different parts of the body, presented the same hue as corresponding parts examined in two individuals, one aged, the other young, who had never taken nitrate of silver. Maceration in simple cold water for several days made no difference in the depth of the slate tint of the pieces of skin thus treated. The cuticle of the skin, the epithelium of the tongue, and the mucous body were colourless; the peculiar tint in question resided entirely in the corion, both of the external and internal tegumentary envelop.

## ARTIFICIAL STAINING OF THE SKIN.

1090. Harrold informs us<sup>4</sup> that he had seen a man who became uniformly black by taking sulphur during a mercurial course; a kind of *Æthiops mineral* appeared to have formed on the surface of the body. Dr. Rigby also tells us<sup>5</sup> that he has known a patient, labouring under syphilis, complicated with scabies, who was ordered to rub in mercurial ointment, after having been treated with the unguentum sulphuris, become as black as an *Æthiop*. This phenomenon, which is easily imagined, disappeared very speedily after the disuse of the medicines named. I have myself seen a kind of black scurf formed on the surface of the skin of workmen employed in the manufacture of white lead, whom, having become affected with paralysis of the extremities, from the action of this poison, I had ordered to take the sulphureous water-bath.

M. Chevalier<sup>6</sup> was once consulted by a young woman as to the means of getting rid of a great number of black stains upon her face: he discovered that these were produced by a solution of nitrate of silver, designated *Eau de Perse*, which this damsel used to dye her hair.

1091. Various substances applied to the surface of the skin stain it of different colours. The females of our great cities especially, are, many of them, in the habit of using rouge, with a view to restore the brilliancy of the complexion, when wrinkles and the lapse of years begin to abate its colour and freshness. The women of Greenland rub their faces with white and yellow; those of Nova Zembla streak their foreheads and chins with blue; the Japanese dye their lips and eyebrows with the same colour; the old inhabitants of the Canaries painted their bodies red, green and yellow; the ancient Britons preferred blue for this purpose; the negroes of the kingdom of Juida (Guinea) paint their persons red [and the female savages of London and Paris still bedaub themselves with rose pink and pearl white].<sup>7</sup>

1092. The study of these strange practices, and the discussion of several other species of artificial maculation of the skin, are almost foreign to the object of this work. Paré informs us that in his day lazy mendicants used to rub their faces and persons with a mixture of wood soot and water, to simulate jaundice; the deception was readily detected by examining into the white of the eye and applying a wet towel to the skin. Many have also attempted to simulate icterus by staining their skin with a strong infusion of rhubarb, of the curcuma or chelidonium.<sup>8</sup>

1093. Motion, friction, and the action of the perspiration, speedily rub off or alter colouring matters applied to the skin; to fix them

<sup>1</sup> Quarterly Journal of Science, 1830.

<sup>2</sup> Badely. On the effects of nitrate of silver on the complexion. (Med. Chir. Trans., tom. vii.)

<sup>3</sup> Lombard. Emploi du nitrate d'argent à l'intérieur. (Gaz. Méd. de Paris, 1832, p. 487.)

<sup>4</sup> Meckel's Archiv.

<sup>5</sup> The Lond. Medic. Repository, April, 1817.—Bibliothèque médicale, t. lx. p. 408.

<sup>6</sup> Lancette Française, fol. Paris, t. x. 167.

<sup>7</sup> Consultez sur ces colorations artificielles de la peau, Cadet de Gassicourt, Art. fard. Dict. des scienc. méd.

<sup>8</sup> Jaunisse simulée avec la chélidoine. Journal général de médecine, t. xiii. p. 341.



permanently the art of tattooing has been invented; this custom exists extensively over the face of the globe. The colouring matter appears to be inserted into *linear incisions* of considerable depth in many cases; although in some of the tattooed heads preserved in our museums, the skin appears without cicatrices, but chiseled as if the lines had at least been retouched after the death of the individual.

1094. In Europe the practice of tattooing is unknown, save among our sailors, and the lazy soldiers confined to garrison duty. After having drawn with a pen and ink the letters or designs they mean to imprint upon their skin, these tracings are thickly pricked with needles, and colouring matter is then rubbed into the punctures. The only mischief that ever follows this practice is the occasional excitement of a kind of phlegmonous erysipelas.

1095. The stains thus produced by the insertion of indigo, curcuma, red lead, finely pulverized charcoal, &c., are indelible like those that follow burns with gunpowder. They cannot be removed by blisters, nor any other form of topical application, unless they act so energetically as to destroy the corion at the same time, in the substance of which the colouring matters which cause them are fixed.

1096. After having macerated several pieces of tattooed skin, I found that the epidermis was not coloured any more than that of the unchanged parts of the skin; that the colouring matter was deposited underneath it, and at various depths from the surface of the corion, as the needles had been forced more or less deeply; and finally that the tattooed corion was firmer and harder than that which was in its natural state.

## HYPERTROPHIÆ.

1097. The papillæ of the skin and the epidermis, the vascular rete, occasionally the entire substance of the skin, and even the subcutaneous tissues themselves, now and then occur of unusual thickness. This state may be either congenital or adventitious.

### *Hypertrophy of the Papillæ and Epidermis.*

1098. The papillæ of the skin occasionally present themselves of unusual dimensions, and the cuticle which covers them almost invariably then undergoes very remarkable modifications. I shall, by and by, detail a case of congenital extraordinary development of the papillæ, which, projecting like fringe, became covered with an almost cartilaginous epidermis. Ulcers on the legs, *chronic eczema*, *impetigo figurata*, and particularly blisters—(§ 311)—are occasionally accompanied or followed by an unusual development of the papillæ; these become particularly apparent when the part affected is plunged in water, and look mammillated and uneven, like the pile of coarse plush or velvet. The skin in these cases is habitually covered with scales, sometimes micaceous in appearance, generally brown and rough, and easily rubbed off. By maceration the cuticle can be removed entirely; this part is then found to consist of several laminae, the innermost of which adheres to the points that correspond to the hypertrophied papillæ. It occasionally becomes necessary to remove the callous and nipple-like granulations which the papillæ form in some cases, with the flat scissors.

Excessive development of the papillæ and epidermis is besides one of the principal characters of several other diseases.

1099. To this hypertrophy of the papillæ of the skin observed after blisters, must be assimilated the affection which Mr. Hawkins describes under the title of *warty tumours of cicatrices*,<sup>2</sup> which appear on the surface of old cicatrices succeeding wounds of very dissimilar kinds, and several years after the date of the original injuries. These growths make their appearance on the cicatrice in the shape of a small wart or warty tumour, covered with a thin epidermis, and dry in the

first instance, but which soon becomes moist and the seat of partial ulcers, like the warts of mucous membranes, and which finally secrete a thin, sharp, half-purulent looking matter. At this time there is no complaint made either of pain or inconvenience of any kind. In its second stage the tumour grows more rapidly, and the resemblance to a wart is lost to a certain extent; a more solid substance arises from the diseased integument, whilst around the original excrescence new warty formations go on making their appearance, which in their turn undergo changes similar to those that have been already mentioned. The excrescence is extremely vascular, and bleeds when touched; a probe can generally be pushed through its irregular tissue; sometimes, however, it is of such solidity as to resist the blunt end of the probe. This kind of excrescence is best removed with the knife.

## ICHTHYOSIS.

Vocab. *Ichthyosis*, *Fish-skin disease* [*Porcupine disease*].

1100. Ichthyosis is characterized by a morbid development of the papillæ and thickening of the epidermic lamellæ; these often assume the form of small irregular compartments, which have been compared to the scales of fish. The affection may be almost quite general, or it may be confined to a single region. (a)

1101. *Symptoms*.—When ichthyosis is general, it is always in those places in which the skin is naturally thick, and the epidermis rough, as around the great articulations, on the anterior and external parts of the lower extremities, in front of the patella, over the olecranon, &c., that the altered epidermis becomes thickest. Everywhere else the adventitious layer which it forms over the surface of the skin is much thinner; it is commonly entirely wanting on the prepuce, eyelids, groins, axillæ, &c.; in a word, in every place where the skin is soft and of great delicacy. This morbid development of the cuticle is also very rarely seen on the palms of the hands and soles of the feet, and when it does appear there, it is always to a less extent than in the regions mentioned as its principal seats.

At the period of birth, *congenital ichthyosis* is usually but little apparent. Yet in the anatomical collection of Berlin, there is a fetal monster preserved, the whole surface of whose body is covered with a thick layer of epidermis. The skin is also several lines in thickness; the cuticle presents numerous fissures, and forms a covering like a coat of mail to the body. This singular case has been particularly described by M. Steinhausen.<sup>3</sup>

The skin of those infants, who are by and by to become the subjects of ichthyosis, instead of being smooth and soft as usual, appears sallow, dry, and like shagreen. The affection is proclaimed with characters less equivocal during the course of the two first months of existence. The cuticle in some places becomes rough, sallow, of a grayish colour, and to the touch conveys a sensation similar to what is communicated by the skin of the aged in many cases. An alteration of the epidermis to this extent may continue during a whole lifetime without going farther; or it may increase with the progress of years until it becomes excessive.

Ichthyosis may occur several months after birth, with more decided characters. After having passed by different intermediate degrees of thickening, the epidermis at length appears divided into small irregular compartments, the appearance of which is certainly more analogous to that presented by the legs of fowls than to that of the scales of serpents, although Alibert has designated the variety of ichthyosis under review by the title of *ichthyose nacrée serpentine*.

When ichthyosis shows itself with characters still more decided, it appears upon the extremities, especially in the sense of their extension, under the guise of a thick epidermic layer, which has been likened by some pathologists to the bark of certain trees. In this, as in the two first varieties, the epidermis appears composed of numbers

(a) Ichthyosis is divided by Mr. E. Wilson into *I. simplex*; *I. cornea*; *I. spuria*.

<sup>1</sup> Baier (Ferdin. Jacob). De verrucis post vesicatorium recens applicatum suboritis. Nova acta Acad. Nat. Curios., vol. ii. p. 298.

<sup>2</sup> Hawkins. Lond. Med. Gazette, December, 1833.—Gazette médicale de Paris, 1834, p. 71.

<sup>3</sup> Steinhausen. De singulari epidermidis deformatione, Berlin.—Gazette médicale, 1831, tom ii. p. 10.



of small compartments, very irregular in their shapes, not imbricated, not more than from two to three lines in diameter, generally broad in proportion as they are thin, and of a grayish or sallow hue. In some rare cases they are shining and in some sort opalescent; more frequently they are of a deep brown colour; the surface is then so rough that the hand passed over it experiences a sensation similar to that which is felt when a file, or shagreen, or the skin of certain fishes is handled (*Ichth. nacrée cyprine*, Alib.). These squamæ may be detached without causing any pain, if we except the largest, which always seem to adhere more strongly, and which, when removed, occasion at least an unpleasant sensation. In every case, when they are detached, whether by friction or in any other manner, they are speedily reproduced with the same characters as before.

1102. There is a fourth variety of ichthyosis, extremely rare, but very remarkable. Individuals have been seen whose skins were covered with numerous small and prominent appendages, which could not be taken away without pain, or the subsequent exudation of a reddish or sanguinolent fluid. These appendages are often whitish internally, though black on the surface. One of the most remarkable cases of this singular alteration of the skin, occurred in a man, a native of Suffolk, who exhibited himself about the year 1710, and was known under the name of the *porcupine man*. The whole surface of this individual's body, except the face, the palms of the hands, and the soles of the feet, was covered with small excrescences in the form of prickles. These appendages were of a reddish-brown colour, and so hard and elastic, that they rustled and made a noise when the hand was passed over the surface. They had appeared two months after birth, and fell off every winter to reappear with the summer. The man was, in other respects, in very good health; he had six children, all of whom were covered with excrescences like himself; the hand of one of these children has been figured by Edwards in his *Gleanings*;<sup>1</sup> the hand of the father may be found represented in the 59th volume of the Philosophical Transactions. (a)

This race of *porcupine men* has been mentioned by several writers, the accounts being taken from the well-known family of the name of Lambert. The whole of the males of this family have the body covered with spines. Two brothers, members of it, were examined by Geoffroy St. Hilaire, one aged twenty-two, the other fourteen. The body of the elder, except the head and palms of the soles, was entirely covered with spines; the younger was naked in several places, particularly over the breast; but a number of brown spots showed that with age he would probably become as completely covered as his brother. The spines on the back of the hand were extremely thick, and might have been compared, as far as the diameter was concerned, to the quills of the porcupine; those which surrounded the nipple bore a greater resemblance to squamæ; they formed long narrow laminæ, very numerous, closely set, and implanted vertically into the skin. This thickening of the epidermis and hair was the effect of a morbid disposition, which was transmitted hereditarily, but only from father to son; the daughters not being affected. Five generations could be reckoned which had been affected in the manner described.<sup>2</sup>

Local and accidental ichthyosis constitutes a fifth variety very distinct from the preceding species, which, in its mode of development, bears the greatest analogy to that of corns; of this nature is the ichthyosis evolved on the anterior and lower part of the thighs in shoemakers, in those places upon which the last rests, whilst they are going on with their work, and especially when they are driving nails into the soles of shoes; of this nature is the scabrous formation which occurs on the elbows of paper stainers, on the surface of the outer ankle in tailors, &c. I have also observed a morbid development of the papillæ of the tongue, in a man in all respects in very good health, which I regarded as precisely similar in its nature to local ichthyosis of the skin.

It is not uncommon for the skin, in subjects affected with ichthyosis, to cast off the adventitious epidermic formations, characteristic

of the different varieties of the general disease, during the summer season; these are, however, constantly reproduced on the approach of autumn. This kind of desquamation has also been observed at other seasons. The skin, divested of its squamæ, shows no signs of inflammation; whether the epidermis have been removed by the influence of the seasons, or by the action of the vapour bath, or any other external application, its colour is natural, only the shallow furrows which occur on its surface are more remarkable than usual. The cutaneous exhalation and follicular secretion appear to be entirely suppressed, or, at least, are inappreciable.

Ichthyosis is not accompanied with pruritus, nor with any other morbid sensation. Neither does it seem to have any kind of unfavourable influence on the general constitution; I have met with several individuals labouring under the first and third varieties of the disease, who enjoyed the most perfect health, and were very robust. In these individuals it is probable that the pulmonary exhalation and urinary secretion supplied the place of the defective cutaneous perspiration; which, however, is sometimes seen to be very copious in the palms of the hands and soles of the feet.

Individuals labouring under ichthyosis are liable to be attacked with acute inflammation of the skin. I have given the case of a young man, twenty-three years of age, affected with congenital ichthyosis who died of small-pox.<sup>3</sup> The porcupine man, seen by Baker, also contracted small-pox; his skin was temporarily freed from the squamæ, but these reappeared before long. I have also seen ichthyosis modified by the occurrence of an internal disease; during its course the squamæ became thinner, the surface less dry and rough, &c., but the ichthyosis recovered all its original characters as soon as the disease which had accidentally complicated it, had subsided.

1103. *Anatomical observations.*—I have tried the effect of maceration upon portions of the skin of individuals who had laboured under ichthyosis. The small compartments of which the epidermic layer consists, and which give the malady its principal external characters, are readily detached under the form of a grayish or blackish membrane, impregnated with pigmentary matter in the porcupine species, little or not at all coloured in the other varieties of the affection. These small compartments do not overlap each other like the scales of a fish; the title ichthyosis, taken in its literal signification, would lead to an erroneous anatomical idea. Tilesius made a few experiments on the nature of the thick black superficial epidermic layer, which was detached in squamæ from the bodies of the brothers Lambert. Buniva has since assured us that the squamæ were nothing more than gelatin, become hard and solid from its combination with a certain quantity of phosphate and carbonate of lime. M. Delvaux has discovered that it also contains a little carbonate of iron and traces of silica; consequently that the squamæ of ichthyosis supplied the same chemical principles as the nails, the hair and the epidermic productions generally. I have myself demonstrated experimentally that this substance possessed physically and chemically the same properties as the epidermis. Dr. M. Good,<sup>4</sup> who designates it improperly by the title of *incrustation*, supposes it to be formed by cutaneous secretions containing an excess of calcareous matter. Under the first epidermic layer in ichthyosis, which is commonly coloured by pigmentary matter, a second is found of a dirty white or grayish hue.

The lines or furrows which the corion presents on its outer surface are much more decided in ichthyosis than in the standard condition. The papillary eminences, which are also much more remarkable than on the healthy skin are sometimes extremely large; it is indeed to the hypertrophy of these that Tilesius ascribes the production of the epidermic spines in the porcupine men. I have ascertained the occurrence of this hypertrophy in the four first varieties of ichthyosis. This excess of development of the epidermic layers recalls an analogous circumstance already observed in a great number of simple cutaneous warty productions.

Tilesius informs us, that in the brothers Lambert, the cutaneous follicles were obstructed, and full of a thick substance. These organs were but little apparent, and in many places imperceptible, in the great majority of the subjects affected with ichthyosis, whom I have examined. The hair and hair bulbs were found remarkably enlarged in a particular case, the history of which is given by Dr. Martin. To conclude, the

(a) See, also, for a notice of this family, Lawrence's Lectures on Physiology, &c., sect. ii, chap. vii.

<sup>1</sup> Gleanings of Natural History. London, vol. i. 1758; ii. 1760; iii. 1764, 4to., pl. 212.

<sup>2</sup> Bulletins des Sciences par la Société philomathique, No. 67, p. 146, an. ii. de la République.

<sup>3</sup> Case LXV, p. 161.

<sup>4</sup> Study of Medicine, vol. iv. p. 591.



corion has always appeared to me to be thicker, harder and more dense than it is in the natural state.

In the small number of cases in which opportunities have been found for examining the bodies of individuals affected with ichthyosis, who have died of some accidental intercurrent disease, a variety of organic changes, differing both in kind and situation have been observed, which appeared in nowise connected either with the development or the existence of this affection of the skin.

1104. *Causes.*—General ichthyosis is by no means a very rare disease, at least in France. I have myself seen above forty cases of the kind. It is known to be transmitted through several successive generations. The history of the Lambert family, which has been given by Geoffroy St. Hilaire, Tilesius and Buniva, affords a remarkable instance of the affection being only transmitted to the males. Ichthyosis is seldom developed accidentally long after the period of birth. The whole of the male children of the same father and mother, who were themselves free from such an affection, have been seen labouring under ichthyosis. Such was the case of the brothers, Brayer, born in the department of Cantal. One of them, John, who became a patient at the Hôpital de la Charité, in 1827, assured me that his brother, thirty-seven years of age, was like himself affected with ichthyosis, although neither his father nor his mother had ever been the subjects of a similar affection, of which his three sisters also presented no indication.

Some pathologists have ascribed the development of ichthyosis to moral affections of the mother during pregnancy; this cause, however, is very problematical. I was once consulted on account of three little boys affected with congenital ichthyosis, born of healthy and well-formed parents; and the mother assured me that she had never been better than during her three pregnancies, in none of which had she suffered any thing like mental disquietude or alarm. Neither climate, nor mode of life, nor temperature appears to exercise a marked influence on the production of this disease. It does not appear to be endemic in Hayti, in Paraguay, nor among the inhabitants of the sea coasts or banks of rivers who live much upon fish, as it has been stated to be on insufficient authority.

Women are known to be much more rarely affected with ichthyosis than men.

1105. *Diagnosis.*—Ichthyosis bears but a remote and slight resemblance to the squamous inflammations. Willan and Bateman, and several other pathologists, certainly did wrong in uniting these affections into a single group. Ichthyosis almost invariably makes its appearance in the course of the first months of existence, and continues during the whole of after life. It is not accompanied either with morbid heat or pruritus, or, in a word, with any other symptom observed in inflammation of the skin. (a) In lepra, psoriasis and pityriasis, the production of squamæ is constantly preceded by redness of the skin, which can be readily made apparent by divesting the integument of the epidermic scales and furfuræ deposited on its surface. In confluent and inveterate lichens, the skin may become rough, brownish, and covered with an infinity of minute scales somewhat similar in appearance to those of slight and partial ichthyosis; but this state is accompanied with pruritus of the most insupportable description, and is preceded by an eruption of papulæ. The simultaneous existence, or the ulterior evolution of papulæ on some neighbouring point of the skin already covered with furfuræ, will always suffice to dissipate any doubt which might be entertained of the true nature of these obscure cases. Local ichthyosis is no less distinct from the squamous and furfuraceous states which the skin presents around old ulcers, or after chronic and long-standing eczemas.

We know that from the second to the fifth, and sometimes the tenth day after birth, the skin of the new-born infant throws off its epidermis. (b) This *epidermic exfoliation*, which has been particu-

larly studied by Billard,<sup>1</sup> can never be confounded with ichthyosis; for independently of other circumstances, it does not continue longer than a limited period. The skin of the aged is also occasionally affected with an epidermic exfoliation, which differs from the slightest known form of ichthyosis in the absence of all thickening of the cuticle about the knees and elbows, a condition the existence of which is invariable in the latter affection.

It were useless here to particularize the numerous characters which distinguish ichthyosis from all kinds of horny productions of the skin, and from pellagra; these having been either already mentioned, or being about to be noticed. But I think it necessary to solicit attention to a mistake which must be readily fallen into, seeing that two excellent observers have committed it. Bateman has given a figure in his atlas under the title of *ichthyosis of the face*,<sup>2</sup> of a case which is certainly one of *ceruminous or sebaceous deposit* from diseased action of the follicles; and Dr. A. T. Thomson has detailed a case of the same description under the same erroneous title.<sup>3</sup> In this affection of the follicles, however, which I was the first to notice particularly, the part of the integument affected becomes at first, as it were, unctuous or oily; the secretion of the sebaceous follicles then increases; the fluid thrown out upon the surface acquires additional consistency, and finally forms a kind of *squamous crust or layer* of greater or smaller extent. Soft at first, and adhering but slightly, it by and by acquires hardness, and then cannot be removed without occasioning very considerable pain. The skin under this sebaceous deposit is of a vivid red; the orifices of the follicles appear dilated, and sometimes distended with concrete sebaceous matter. (c)

1106. *Prognosis and treatment.*—*Congenital* ichthyosis often disappears for a time in consequence of acute inflammation of the skin. *Local or accidental* ichthyosis is often successfully treated by means of flying blisters, or topical stimulants. In two cases, in which this chronic alteration of the skin was limited to the legs, Mr. Plumbe succeeded in curing the affection by strapping the affected parts tightly with adhesive plaster, and applying a long roller kept constantly moistened with cold water. The straps were removed every fourth or fifth day, and brought away with them the accidental epidermic lamina with which they were in contact. The skin under this treatment gradually recovered its natural texture and appearance.<sup>4</sup>

Patients have been recommended to pick off the squamæ with their nails whilst they were seated in a warm bath, or to get rid of them by rubbing the surface with a flannel cloth or coarse towel after coming out of a simple or sulphureous tepid water bath (Bateman). I have always found that though the hardened cuticle could be readily removed in this way, it was constantly reproduced after the lapse of a few days. Dr. A. T. Thomson has made the same remark.

In *general* ichthyosis emollient applications continued for a long time, gentle frictions, mucilaginous and soothing fomentations, tepid baths frequently repeated, or alternated with the watery vapour or the alkaline bath, used with such discretion as to cause no disturbance in the performance of the principal functions, are usefully employed in clearing the skin from the squamæ that cover it, and in keeping it in a state as near as possible to that which characterizes the healthy integument.

Bateman tried, but fruitlessly, the effect of plasters of different kinds, and a great variety of stimulating lotions and topical applications in *general* ichthyosis. Mr. Coulson<sup>5</sup> appears to have been more successful:—W. Scott, aged eight years, was brought to him on the 13th of July, 1832, having laboured under ichthyosis for several years, the arms and legs being the parts principally affected, but the skin of the breast and back being also brown, dirty looking and

(c) One might be led to infer from this confident critique on Drs. Bateman and Thomson, that ichthyosis of the face is hardly ever met with. This would be a great mistake. I see from time to time a case of congenital origin in which the whole face is implicated.

(a) On this assertion Mr. Plumbe (p. 318, *op. cit.*) remarks—“There is always—always irritation—present, showing itself in some form or other.”

(b) A thick layer (*smegma*) of deadened epidermis, or rather consisting of sebaceous matter and soft and flexible lamellæ, invests the body of the infant at birth. This is soon detached, in zones and patches, at different times within a few days from birth.

<sup>1</sup> Traité des maladies des enfans nouveau-nés et à la mamelle, 8vo. Paris, 1823 p. 32.

<sup>2</sup> Delineations of Cutaneous Diseases, 4to. London, 1817, pl. xviii.

<sup>3</sup> Bateman, Synopsis, 7th edit. 8vo. London, 1829, p. 8. These cases are quoted in a note to § 1187 of this work.—*Tr.*

<sup>4</sup> Plumbe on the Diseases of the Skin, p. 334.

<sup>5</sup> Coulson, in Med. Gaz., vol. x. p. 718.



rugous. No internal medicines were employed, but the parts principally affected were bathed twice a day with a wash of the corrosive sublimate. The skin, although improved in appearance, soon became stiff and tense, and at the end of a week, a liniment consisting of half an ounce of the nitrate of mercury, and an ounce of olive oil, with which the parts were anointed thrice a day, was substituted for the sublimate wash. Under this liniment the scales, as they are denominated, soon disappeared, but the brown colour of the skin still continued.

I have not succeeded in curing a single case of *hereditary ichthyosis* of some extent. Happily this congenital affection of the skin is unaccompanied by every thing like important symptoms, and is in itself, indeed, of no consequence. It is not true that individuals affected with it die early from pulmonary consumption, or are worn out by colliquative diarrhœa.

Willan recommended *tar* as an excellent medicine in ichthyosis. He prescribed this substance in doses of from half an ounce to an ounce daily during several months, and assures us that by this means he succeeded not only in freeing the skin from its thickened epidermic covering, but imparted such pliancy and softness to the membrane, as prevented the recurrence of the affection. Bateman also gives the case of a lady who took, for a considerable time, from two drachms to half an ounce of pitch daily, and tells us that not only did this remedy produce the best effects on the state of the skin, but that her general health improved immensely under its use.

Bateman further informs us, that a young girl who laboured under a slight squamous affection, particularly of the scalp, the shoulders and the arms, got well under the use of the *arsenical solution*. In two other cases, however, the same preparation was tried without advantage.

Under the objectionable title of *Greek leprosy*, Turner describes a case of ichthyosis which was advantageously modified by the exhibition of antimonial, mercurial, and several other medicines.<sup>1</sup>

I must also add that Dr. Elliotson, having been consulted on behalf of two brothers labouring under ichthyosis, was so fortunate as to cure one of them by means of *oleaginous applications*, and the administration of pitch internally. He prescribed, he informs us, a warm bath every day, and desired the patient to anoint himself on coming out of it with oil, treating him like an ancient Roman; twice a day, besides, the whole of the body was rubbed with sweet oil. Pitch was also prescribed internally at the same time, at first in quantities of ten grains a-day, the dose being gradually increased until at last *ten scruples* were taken three times every day. The patient who had laboured under ichthyosis for four years, soon derived the most marked benefit from the treatment; the skin became less rugous, and on the 13th of January,—the patient was admitted into the hospital on the 2d of December,—he was perfectly well, the skin being as supple as that of a young female, and softer than the doctor's own. On his discharge he had a plentiful supply of oil and pitch. From the beginning the patient had been clothed in flannel, and advised never to wipe the surface of his body after having anointed himself with oil. On the contrary he was directed, during the whole period of his stay in the hospital, to wear the same flannel shirt, drawers and stockings, so that his skin was kept constantly impregnated with oil. The pitch had no appreciable effect on the organs of digestion; the motions were the same as they had been before its administration; neither was there any pitch mixed with the evacuations, which had no smell of this substance. The chief difficulty experienced was to induce the patient to swallow so many pills; but he got into the way at last of taking down twenty at a time. A good plan, Dr. Elliotson informs us, of taking pitch pills is to make the patient chew a piece of biscuit till it becomes a soft pulp, with which a number of pills being mixed, the whole is swallowed readily.

Dr. Elliotson was further informed by a gentleman, that a lady of his acquaintance, who had laboured under ichthyosis, and was attended by Dr. Willan, had taken an ounce of pitch daily with the same success as the patient whose case has just been quoted. Dr. E. also knew of another case, treated by Willan, which got well under the use of pitch taken in the same doses.<sup>2</sup>

Willan and Bateman do not tell us, whether the cures they effected were accomplished rapidly; had they been so, these authors would

probably have mentioned the circumstance. The doses of pitch prescribed by Dr. Elliotson were much larger than those ordered by Willan. The warm bath seemed to have had little or no share in the cure of Dr. Elliotson's patient. Having rubbed off the thickened cuticle of his legs, he complained that the baths caused these parts to smart, and they were given up after ten days' trial. It is very possible that the use of the oil hastened the cure. This point deserves to be made the subject of further inquiries.

Several trials which I have myself made, particularly of pitch internally, have not been followed by the beneficial results obtained by the practitioners quoted; whether it was that the cases were more severe, that the pitch was not prescribed in doses large enough, or continued for a sufficient length of time, I know not. I have nevertheless ordered half an ounce daily for more than a month.

Dr. A. T. Thomson reports his having cured a woman attacked with an affection of the skin of the face, which he entitles *ichthyosis*, by the use of a decoction of the roots of the *rumex acutus*; but in reading over the account of this case, I am satisfied that the patient was not affected with true ichthyosis, but with a disease of the sebaceous follicles.<sup>(a)</sup>

#### Historical Notices and particular Cases.

1107. Panaroli,<sup>3</sup> Van der Weil,<sup>4</sup> Mare. Donatus,<sup>5</sup> Schenckius,<sup>6</sup> Willan,<sup>7</sup> Alibert,<sup>8</sup> Janin de St. Just,<sup>9</sup> Ansiaux,<sup>10</sup> Chiappa,<sup>11</sup> &c., have given the details of numerous cases from which information may be acquired in regard to the several varieties of ichthyosis. Among the

(a) The eruption always returned a short time after the decoction was discontinued; and hence, believing the return to depend on habit, Dr. Thomson blistered the face with cantharides plaster, immediately after the eruption was again cleaned off, and the cure became permanent. (Thomson's Bateman, p. 81.) Subsequently (in *Cyclop. Pract. Med.*), Dr. T. recommends the *rumex obtusifolius*.

Mr. E. Wilson (*op. cit.*) sums up briefly the treatment as follows:—“The indications to be fulfilled in the treatment of ichthyosis are two-fold; firstly, the removal of the abnormal production; and secondly, the prevention of its reproduction. The first of these indications may be effected, without much difficulty, by employing the well-known powers of soda in the dissolution of albumen. Warm baths containing the subcarbonate of soda will speedily soften and then dissolve the hardened epidermis. The second indication calls for the use of measures which are calculated to modify the state of the system. For this purpose, alteratives should be used, both externally and internally, with the intention of exciting a different action in the cutaneous textures. Some stimulating application, such as a liniment, or ointment of croton oil, in the proportion of a drachm to the ounce, should be rubbed into the skin, with a view to excite and keep up the capillary activity; while the liquor potassæ, the hydriodate of potash, or, as a last resource, the liquor arsenicalis, should be administered internally. (a) Willan, Bateman, and Elliotson, have recommended the use of pitch, taken internally, in doses of an ounce, daily; creosote is an elegant substitute for this remedy. Ichthyosis cornea may be treated with local stimulants, in addition to the constitutional management. The nitrate of silver, in solution, may be used beneficially in this form. The spurious form of the disease, particularly when it affects the lower extremities, requires the use of well-adjusted bandages. These, with some slight stimulant, will frequently remove the disposition to recurrence of the epidermic formation.”

(a) Plumbe assures us that both pitch and arsenic have failed in his hands.

<sup>3</sup> Panaroli. *Tatralogismorum, seu medicinalium observationem pentecostæ quinque*, etc.; Romæ, 1652, 4to. Pentecost, v. obs. 9.

<sup>4</sup> Van der Wiel. *Obs. rarior.*, cent. 1 et 2, 8vo. Leidæ, cent. 2, obs. 35.

<sup>5</sup> M. Donati. *De historia medicâ mirabili opus*, etc., lib. 1 and 3. Mantuæ, 4to.

<sup>6</sup> Schenck. *Obs. med. rarior.*, p. 699.—Vater. *Programma de cuticula pueri XV. annorum cutis rhinocerotis aut corticis arboris instar incrassata*. Vitemb., 1732.

<sup>7</sup> Willan. *On Cutaneous Diseases*, 4to. Art. Ichthyosis.

<sup>8</sup> Alibert. *Dermatoses*, 8vo. Art. Ichthyose.

<sup>9</sup> Janin de Saint-Just. *Journ. compl. des sc. méd.*, t. v. p. 220.

<sup>10</sup> Ansiaux. *Bulletin des sc. méd. de Férussac*, t. xv. p. 289.

<sup>11</sup> Chiappa. *Revue méd.*, 1829, mars, p. 385.

<sup>1</sup> Turner on Diseases incident to the Skin, 5th edit., p. 30.

<sup>2</sup> London Med. Gaz., vol. vii. p. 636.



most serious cases on record, however, are undoubtedly those of the brothers Lambert, of which Tilesius<sup>1</sup> and Buniva<sup>2</sup> have each published very accurate details. Dr. Martin<sup>3</sup> has lately described a very remarkable variety of ichthyosis in which the skin was covered with strong hairs like the bristles of a boar. Follet<sup>4</sup> and Joulhia<sup>5</sup> have also described two varieties of ichthyosis in their inaugural dissertations.

CASE CLXXII.—*Ichthyosis over part of the legs and feet; erysipelas of the left leg; death from perforation of the heart.* Lanautte, aged seventy-seven, entered the hôpital de la Charité, on the 23d of March, 1832, on account of an œdematous erysipelas of the left leg. For the last two years, this old man has suffered habitually with swelled legs towards evening, and for a year past has complained of pains in his limbs, which he attributes to the dampness of the room in which he lives. In 1825, he wounded his right leg, which did not get well till it had been eight months under treatment. At this present date, 24th April, 1832, the patient is in the following state.

The left leg is affected with ichthyosis, and with an œdematous erysipelas, and is covered with several phlyctenæ. The ichthyosis only extends over the lower third of the outer and posterior part of the legs, and a portion of the dorsum of the foot. It is characterized by small epidermic lamellæ, from one to two lines in diameter, and from half a line to a line in thickness, rising above the level of the healthy skin towards the circumference of the patch, of an irregular quadrilateral shape, slightly adherent to the skin, and separated from one another by slight furrows.

The erysipelas is characterized by a great increase in the heat of the skin, and a violet-red colour of its surface: the inflammation reaches as high as the knee on the inside, not higher than the level of its upper third on the outside. The colour is so deep in some places that it seems to be produced by a deposition of blood within the substance of the skin; for it cannot be made to disappear with pressure. Several bullæ or phlyctenæ are scattered over the parts most violently affected. Some of these of considerable size are isolated; others smaller are crowded and confluent. Several superficial sores are also observed on different parts of the limb, probably consequent on excoriated phlyctenæ. The surface of these presents different appearances according to their date. The subcutaneous cellular membrane is œdematous; the skin pits on pressure, and preserves the print of the finger.

The right leg is unaffected with inflammation. On the dorsum of the great toe, however, there is an erythematous spot. The lower part of this leg is affected with ichthyosis like the left.

There is an ecchymosed spot on the back of the left hand. The patient is besides affected with inguinal reducible hernia. He is exhausted with diarrhœa and complains greatly of thirst; the tongue is covered with thick mucus. The pulse is febrile in its beat. (*Bandage to the legs; simple dressings; eight leeches to the inferior and inner part of the left thigh; mucilaginous drink.*)

April 25th. The puffing and redness of the left leg have declined; but the patient is in a state of collapse, and is comatose. He died next day. *Sectio cadaveris.* The integument of the left leg presents the same violet-red colour it possessed during life. The skin of the lower third of the outer aspects of both legs, and that of the dorsal surface of the feet, is covered with a grayish epidermic layer, three or four times thicker than the healthy cuticle, divided into an infinity of small compartments, mostly of a quadrilateral shape, under which the layer of epidermis was discovered which was continuous with that of the healthy skin towards the circumference of the altered patch. The dermis of this patch was thicker, denser, and presented deeper furrows or lines than those of the healthy skin. The nails of the feet were long and thick. The subcutaneous cellular tissue of the inflamed leg was loaded with serum, and felt firmer under the scalpel than healthy cellular substance. The vena saphena was not inflamed; the

subcutaneous bursa mucosa of the left knee was red, injected, and contained a little yellow purulent matter. *Head.* The brain was healthy; there were about three spoonfuls of serum in each ventricle. *Thorax.* The lungs were loaded with blood posteriorly, and presented a number of blackish marblings anteriorly. The pericardium contained about six ounces of sanguinolent serum, or rather of fluid serous blood. At the base of the heart near the left auricle a fibrinous clot was discovered, the broad extremity of which was free, and floating in the cavity of the pericardium, whilst the other was impacted in the tissue of the auricle. This coagulum having been detached by means of a jet of water, we discovered a small opening in the auricle, into which a grooved director could be readily passed; the instrument penetrated a kind of sub-pericardial pouch filled with clots of blood. After washing away this blood, we found two small openings into the left ventricle near the attachment of the mitral valve which was ossified; the blood seemed, therefore, to have made its way from the left ventricle into the substance of the auricle, and from this into the pericardium. The substance of the heart was ecchymosed, and infiltrated with blood around the seat of the effusion. The substance of the heart elsewhere was of a tawny yellow colour, and tore with ease. There were also various other morbid appearances about the heart. *Abdomen.* The lower part of the œsophagus was slightly injected. The liver was altered, as was the spleen also. The kidneys appeared simply injected. The urinary bladder presented a remarkable alteration; a great number of fine filaments arose from the inner surface of this organ, and floated free within its cavity, so that the part, especially when laid in water, bore a pretty strong resemblance to one of those large powder puffs which were formerly in use for powdering the hair. The preparation is preserved in the collection of the École de Médecine. I very lately met with a second instance of the same organic alteration; the filaments, however, were less numerous, and not so long as in the case I have just mentioned; they were also intermingled with vesicles from one to two lines in diameter, adhering to the inner surface of the bladder, and consisting of a single extremely thin and pellucid envelop, containing a watery and colourless fluid.

CASE CLXXIII.—*General ichthyosis. Palliative treatment.* A wagoner, thirty years of age, had been affected with ichthyosis from his infancy. The affection was especially remarkable on the lower extremities, particularly in the sense of extension, and in the neighbourhood of the knees. In these situations the skin was covered with small thickened squamæ, of a blackish colour, and so rough that the appearance presented was altogether very similar to that of the bark of a tree. The trunk and superior extremities were covered with a cuticle which was evidently much thicker and drier than in the healthy state, and which was detached in the form of furfuraceous squamæ. This alteration did not extend to the skin of the face. The principal functions were performed with perfect regularity. The patient was directed to take the vapour and simple tepid water bath alternately. The squamæ disseminated over the surface of the body became, under this treatment, thinner and fewer. This palliative treatment had already been successful on two different occasions.

#### VERRUCÆ. WARTS.

Vocab. *Verruca, Wart.*

1108. Warts are small elevations produced by hypertrophy of the papillæ, and occasionally of the whole of the different component layers of the skin. (a) There are two species of warts:

1st. Some, commonly evolved upon the hands, (*verruca vulgaris*), are small eminences, from a line, or less, to two lines in diameter, rising to the height of from half a line to a line above the general level of the skin, rough, and almost insensible on their surface. When one of these warts is cut vertically across in the dead body, the epidermic laminae of the skin form a covering of various thickness over the exterior of the wart; the corion itself rises to the sur-

(a) Meynier of Orleans advances the opinion that warts in man are *gymnosporanges*.

<sup>1</sup> Tilesius. Ausführliche Beschreibung und Abbildung der beyden sogenannten Stachel-schweinmenschen aus der bekannten englischen Familie Lambert, fol. Altenbourg, 1802.

<sup>2</sup> M. Buniva. Particularités les plus remarquables de deux corn-écailleux nommés Jean et Richard Lambert, observés à Turin en février et mars de l'an 1809, fig. Mém. de l'Acad. imp. de Sciences, lettres et beaux-arts de Turin, 4to. Several additional observations on the same family may be found in the Lond. Med. and Surg. Journ., Sept., 1834.

<sup>3</sup> Martin (P. L.). Medical and Chirurg. Transactions, vol. ix. part 1, p. 153.

<sup>4</sup> Follet. Diss. sur l'ichthyose cornée. Paris, 1815, p. 280.

<sup>5</sup> Joulhia. Diss. sur l'ichthyose nacrée. Paris, 1819.



face of the wart in the shape of a little tuft, enveloped by the cuticle which dives down between each of the papillary eminences. Small blood-vessels, in the form of red striae, accompany these prolongations of the corion; to conclude, small blackish points are frequently observed in the substance of warts.

1109. 2dly. Instead of small isolated eminences, *warty bands* are occasionally observed on the surface of the skin. These are commonly reddish, or of the colour of the skin, and are formed by small prolongations of the dermis, and of the papillæ, which arise from the particular part of the skin affected under the form of a kind of coarse plush or shag. It is frequently difficult to decide whether these are syphilitic or not (§ 922). M. Rennes<sup>1</sup> met, in the person of a conscript, with a very remarkable instance of this variety of wart; a band of agglomerated warts, from eight lines to an inch in breadth, extended from the upper and anterior part of the right side of the breast, underneath the clavicle, along the arm and forearm of the same side, till it reached the carpus, where it increased considerably in breadth, and finally overspread the whole palm of the hand.

1110. Warts occur at all ages; but they are certainly more frequent in childhood and youth than in old age. M. Marc saw a woman whose face and fingers became covered with warts, after an apoplectic attack. Habitual irritation seems to provoke their development on the hands; they are therefore most commonly seen among individuals who handle hard substances, who are negligent of proper cleanliness, and whose hands are exposed to great variations of temperature. Turner was of opinion that they were more common than usual among persons who milked, and had the charge of cows. Some individuals appear to have a kind of predisposition to warts, which return after they have been destroyed, in spite of every regard to cleanliness. It has been said that the blood which flows from a wounded wart is liable to cause the formation of others on the parts it touches. M. Cruveilhier informs us that M. Brunel showed him a band of warts upon the back of the hand, assuring him that they had sprung up in the line of the stream of blood which had followed the removal of one of these productions. I have tried repeatedly to inoculate warts in this manner, but the operation has never succeeded.

1111. Common warts must not be confounded with several small appendages of the skin which have been denominated pediculated warts, nor with those small *lenticular* hypertrophies of the corion without thickening of the cuticle, which are occasionally met with on the skin of the back of the hands, and which have also been designated under the name of warts.

Warts differ from syphilitic excrescences; the latter, preceded or accompanied by various symptoms of syphilitic infection, are situated especially on the genital organs, on the chin and face generally, and frequently disappear under the influence of the preparations of mercury, the deuto-chloride of gold and soda, &c. Vascular excrescences are of various shades of red, and pour out an infinitely larger quantity of blood, when punctured or excised, than warts. Cancerous tubercles of the nose and face differ from warts in the characters already particularly pointed out (§ 751). Chimney-sweeper's cancer, however, begins with a species of wart, (§ 761,) and many cases of warts on different parts of the body degenerating into cancer are mentioned.<sup>2</sup>

1112. Warts often disappear spontaneously; they are easily removed as well as destroyed; but in either case are apt to be reproduced. Some warts may be tied with a fine silk thread or horse-hair; when their bases are very broad they may be removed with a knife or flat curved scissors; or they may be destroyed by means of caustic applications. When warts are excised they ought to be bathed in warm soapy water for half an hour; they are then to be removed by very thin layers at a time until the blood begins to spring, when their surface is to be rubbed over with nitrate of silver. When active caustic substances are employed to destroy warts, such as the nitric acid, they must first be surrounded with a piece of diachylon plaster, to preserve the healthy skin from the action of the escharotic.

1113. We have been recommended to rub warts with a piece of moistened sal-ammoniac twice a-day; and this salt, though it acts slowly, destroys almost all warts that are not of extraordinary hard-

ness, without exciting either inflammation or pain. The acrid juices of the chilionium majus, of the euphorbia, juniperus sabina, ficus indica, &c., have been celebrated for removing warts in the same manner.

All these topical applications, however, destroy warts less speedily, and less certainly than nitric acid. Lorry tells us,<sup>3</sup> that in the early part of his life, he saw a practitioner order asses' milk to a crop of warts of the face, and that this application removed them, to his great amazement. The same author informs us, that an unstimulating regimen, the tepid bath, and a milk diet should be prescribed for those young people who, without any assignable cause, are affected with great numbers of warts upon the face and other regions of the body. (a)

#### Historical Notices and particular Cases.

1114. The description of warts left us by the older writers, are by no means free from obscurity.<sup>4</sup> The acrochordon appears to correspond to our pediculated warts; the myrmecia to the common *sessile* wart, and the thymus to excrescences.

Warts have not engaged any great share of the attention of medical men.<sup>5</sup>

#### VERRUCOUS NÆVUS.

1115. Dr. A. T. Thomson<sup>6</sup> has given two instances of *warty nævus*. One of these, which is figured in his Atlas, occurred in a young man, twenty-five years of age, in the enjoyment of good health, the skin of the right side of whose breast, from the nipple to the clavicle, over an extent of about eight inches, that of the axilla of the same side, and that of the inner aspect of the arm and forearm, presented a band, nearly two inches in breadth, of congenital papillary eminences, which had grown with extreme rapidity during the last four months. These papilliform eminences, simple or ramified, elastic, of a reddish colour, fungoid, and with narrow bases, were so much crowded together that they stuck out quite straight from the skin. The majority were four lines in length, and nearly three-quarters of a line in diameter. When they were cut they bled profusely. They were habitually moistened with a colourless exudation of so unpleasant an odour, that this alone had induced the young man to seek for medical assistance. When divided, the cuticle was dense and cartilaginous-looking, and was without difficulty detached from a kind of internal vascular nucleus. The appearance of this papillary nævus, however, was not alike in the different regions which it occupied: on the chest the papillæ, larger and redder, were traversed by furrows parallel to the clavicle, at the bottoms of which the white skin could be seen. Along the arm the excrescences looked like longitudinal spines. On the inner and lower part of the forearm, the nævus extended into the palm of the hand, and even along the inner part of the ring and little finger. In these latter situations the appearance of the formation was notably altered; the skin, indeed, only looked somewhat thickened, and the cuticle indurated. Each of the papillæ was separately cauterized with concentrated nitric acid; they were all thrown off in the course of about six weeks, and the young man got completely rid of his infirmity.

(a) "Warty formations on the skin are not unfrequently of a malignant kind, in the aged; and are most commonly situated on the face. The wart is of an angry and irritable character, and soon degenerates into the cancerous ulcer, surrounded by more or less of the carcinomatous deposit. The remedy is, free removal by excision, if possible, before open degeneracy has been fully established. All warts of the face, indeed, should be removed, at whatever age, and however simple their nature may seem to be; they all being most prone, if not certain, to degenerate in advancing years."—*Miller's Principles of Surgery*.

<sup>3</sup> Lorry. De morb. cutaneis, 4to., p. 544.

<sup>4</sup> Foes. Œconomia Hippocratis, Voc. ἀκροχρόνιδες, μυρμηκία, θύμιας.

<sup>5</sup> Wedel (S. W.). Diss. de verrucis. Paris, 1696. Hanin (Louis). Des verrues et de leur traitement. (Rec. period. de la soc. de Paris, tom. xliii. p. 278.)

<sup>6</sup> Thomson (A. T.). Atlas of delineations of cutaneous eruptions, Gr. 8vo. London, 1829, p. 100.

<sup>1</sup> Arch. gén. de méd., t. xxvii. p. 350.

<sup>2</sup> Saviard. Obs. chirurg.—Ephem. Nat. Cur. dec. ii. an. vii. Obs. 224, Misc. Nat. Cur. dec. ii. an. viii. p. 546; dec. ii. an. v. 1686, p. 271.



The other case is related more briefly. It occurred in a child eighteen months old. Here the papillary nævus occupied the right side of the lip and chin. Mr. Okes took away nearly the half of the lip, and a portion of the cheek affected, and by bringing the edges of the wound together, and retaining them in contact by means of a suture, a cicatrice was obtained which caused very little deformity.<sup>1</sup>

To these *warty nævi* we must assimilate a very remarkable case of congenital warts met with by M. Ollivier d'Angers in a fœtus at the full time.<sup>2</sup>

#### HORN PRODUCTIONS.

1116. The anomalous horny productions, often conoidal and prominent (*horns*), sometimes flattened (*horny laminae*), and of various sizes, occasionally observed on the surface of the skin, are formed of a substance very similar to that of the nails and epidermis.

1117. Horny productions are most commonly developed on the head, and on those districts of skin which are most plentifully supplied with sebaceous follicles. The greater number of horny productions result from an affection of one of these follicles. Sir Astley Cooper has given engravings of two cases of these appendages, developed in the cavity of a distended follicle.<sup>3</sup> The simultaneous development of follicular tumours and of these horny appendages has even been observed.

1118. Horny productions, secreted on the inner surface of the follicle, soft at first, soon become hard and tough; they then rise above the level of the skin, and grow both in length and in thickness; they have occasionally been seen several inches long.

During the early periods of their formation, and when they are still of small size, these horny productions are surrounded by a membrane which makes them appear encysted. By and by this membrane only envelops the base of the formation. Horny productions do not extend more deeply than the follicles, within the interiors of which they appear, as it were, to be set. They are consequently always movable, and participate in the motions which the skin receives from the subcutaneous muscles. The cyst, or kind of cyst, in the cavity of which they are implanted, is sometimes the seat of chronic inflammation, which occasionally ends in ulceration.

1119. Horny productions are also frequently evolved on parts attacked with chronic inflammation. M. Julius Cloquet met with a large horny production on the forehead, which made its appearance after a burn. Professor Dubois had an old woman under his care in the Hospice de Perfectionnement, upon whose forehead there was a conoidal horn six inches and a half high by about seven inches in diameter at the base. There is a drawing of this patient in the collection of the Faculté de Médecine. A contusion or wound of the skin had preceded the growth of this horn. The patient complained of habitual headache, the intensity of which was constantly on the increase. The apex of the horn was solid; its base was of a clearer colour, and much inferior consistency. Circular striæ indicated the successive deposits of the matter of which it consisted, and formed inequalities similar to those which are observed on the horns of certain ruminating animals. The cuticle was arranged around the base of the horn, as it is around the root of the nails; it extended beyond the corion to a greater extent, however, namely, by several lines. Portions of the horny production thrown upon lighted coals burned with a smell similar to that which horn diffuses when burned. This production had pushed the integuments of the forehead aside, and especially downwards, to such an extent that the eyelids were habitually closed. The head of the woman diffused a fetid odour.

1120. In a patient of the name of Aumont, who died in the Hôpi-

<sup>1</sup> Home, in Phil. Trans., v. 81, p. 95.

<sup>2</sup> On the front of the thorax and abdomen, shoulders, arms, &c., of this fœtus there were an immense number of warts, of a grayish-white colour, several of which were of the size of a lentil, and all pediculated in a greater or less degree. The larger were cleft to a considerable depth. They passed through the cuticle without being covered by it, springing from the substance of the corion and subjacent cellular membrane. Some of these warts presented the yellowish hue of epheles. The viscera of this fœtus appeared to be quite healthy. (Archiv. gén. de méd., t. xxxv. p. 74.)

<sup>3</sup> Cooper and Travers' Surgical Essays, vol. ii.

tal de la Charité of a disease of the heart, I observed a squamous and pearly-looking production developed on the cicatrice of a gunshot wound of the leg, which he had received in 1806, when in the military service. The cicatrice was covered with scattered pearly squamæ, bearing a strong resemblance to the scales of a carp, which they also equaled in size. Detached by means of warm water, or the tepid bath, these squamæ were soon reproduced. Examined after death, the corion presented an arrangement similar to that of the skin which covers the legs and feet of fowls.<sup>4</sup>

1121. Horny productions may appear on every region of the body. Of 71 cases of the kind in which M. Villeneuve was consulted, thirty-seven occurred in women, thirty-six in men, and three in infants. In nine of these cases the horns were situated on the head;<sup>5</sup> in fourteen on the forehead,<sup>6</sup> and in twelve on the thigh;<sup>7</sup> in the other cases they were situated three times on the temples;<sup>8</sup> five times on the nose;<sup>9</sup> twice on the cheek;<sup>10</sup> once on the jaw; four times on the chest;<sup>11</sup> four times on the back;<sup>12</sup> three times on the penis and glans;<sup>13</sup> four times on the ischium;<sup>14</sup> twice on the knee;<sup>15</sup> twice on the ham;<sup>16</sup> once on the leg, twice on the foot, and once on the hand.<sup>17</sup> They have also been seen on the back of the hand,<sup>18</sup> and above the ear.<sup>19</sup>

1122. The cases of horny degeneration of the skin of different parts of the body, and of monstrosity of the integument observed by Malpighi,<sup>20</sup> \* \* \* \* Ash,<sup>21</sup> Locke,<sup>22</sup> and Musæus,<sup>23</sup> appear to form a separate group, and to depend on a kind of general disposition, different from the morbid processes, of a purely local character, which eliminate horny productions.<sup>24</sup> (a)

(a) "The so-called horns (§ 514) sometimes met with on the head, and developed from the interior of a hair follicle, are nothing more than concretions of inspissated and altered sebaceous substance, modeled in shape by the interior and aperture of the follicle, and partially covered by the attenuated integument, which originally inclosed the sebaceous matter. I have seen productions of this kind so hard from desiccation as to resist the edge of the knife.

"The following is a case in illustration of the sebaceous horn:— Louise Marino, an Italian peasant, fifty-four years of age, perceived, in the month of January, a small tubercle, of about the size of a millet-seed, imbedded in the integument of the root of her nose. The tubercle was attended with a trifling degree of pain and pruritus, but continued to grow with considerable rapidity. On the thirtieth of October of the same year, it had reached the length of an inch, was of a grayish-brown colour, had the diameter of a writing-quill, was grooved along its under surface, and curved like the beak of a bird

<sup>4</sup> This case is surely one of accidental ichthyosis. It seems out of place here.—Tr. Caldani. Mem. di Verona, t. xvi. p. 137.—Schenck. Obs. med. lib. is Cornuti, p. 13.

<sup>5</sup> Ephem. Nat. Cur. dec. iii. ann. iv. obs. 65, ann. v et vi. App. p. 148.

<sup>6</sup> Dumonceau. Journ. de médéc., l. xiv. Carradori. Opuscul. Seleti di Milano, vol. xx. p. 231.

<sup>7</sup> Obs. de Vicq. d'Azyr. Mém. Soc. Roy. de Médéc., p. 494, 1780.

<sup>8</sup> Hist. de l'Acad. Roy. des Sc. de Paris, 1772, p. 25.

<sup>9</sup> Borellus. Cent. i. obs. 14.

<sup>10</sup> Dupré. Philosoph. Transactions, n. 251. (Excrementia cornæ ex calvariâ.)

<sup>11</sup> Avenzoar, lib. ii. cap. v. Scaliger. Exercit. 199, No. 5, ad Cardan. Zacutus Lusitanus. Prax. admir., obs. 188.

<sup>12</sup> Horny productions of the glans have often been preceded by chronic inflammation of this part of the prepuce, vide Caldani (Osserv. Anat. Pathol. oss. xiii. in memor. della Società Italiana, l. xvi. p. i. p. 124). Richond de Brus. Obs. d'une corne sur le gland. Arch. génér. de médecine, l. xv. p. 216; Meckel, sur les cornes accidentelles, Journ. compl. des sc. méd., l. iv. p. 91. For horny productions of the scrotum, vide Wadd (William). Cases of diseased prepuce and scrotum, 4to. Lond., 1817.

<sup>13</sup> Rigel. Dict. des sc. médic. t. iv. p. 251.

<sup>14</sup> Benedictus. Histor. c. h. cap. x. p. 10. Denis. Recueil des mémoires, et conférences sur les sciences, 1672. Hambourg.

<sup>15</sup> Borellus. Cent. iv. obs. 52. Dolæus, Epist. p. 216. Ephem. Nat. Cur. dec. i. ann. i. Obs. 30, etc.

<sup>16</sup> Arch. génér. de médecine, t. xxiii. p. 453.

<sup>17</sup> Otto, Seltene Beobachtungen, cap. i. p. 109. Breslau, 1816.

<sup>18</sup> Parkinson. Memoirs of the Medic. Society of London, vol. vi. App.

<sup>19</sup> Malpighi (De cornuum vegetatione, in Mangeti Bibl. Anat. p. 38, fol. Genevæ, 1685), has described and represented a case of horny production observed on the palms and soles, with deformity of the nails, in a woman aged thirty.

<sup>20</sup> Ash. Philosoph. Transact., n. 176.

<sup>21</sup> Locke, ib. n. 230.

<sup>22</sup> Musæus. De unguibus monstrositis et cornuum productione in puellâ cornigerâ. Kopenhagen, 1716.

<sup>23</sup> Morgagni met with a horn on the prepuce, which followed the degeneration of a wart. (Epist. lxx. art. 2.)



1123. Besides the horny productions developed in the cavities of the sebaceous follicles, similar formations are occasionally seen succeeding a variety of wart. Rose Davène, aged sixty-four, of healthy constitution, and the mother of seven children, consulted me at the Bureau Central des Hôpitaux on the 31st of August, on account of a yellowish-coloured horny production, more than two inches in length, the base of which was fixed upon an inflamed patch of the skin, covering the inner surface of the thigh. In the situation which this production now occupied, two small spots (*boutons*) had appeared about six years ago, which had suppurated. On the seat of these a wart made its appearance, and by and by became covered with a horny top, which she had removed with a ligature; but it soon grew again, and was now of the length mentioned. It was only troublesome in walking; the glands of the groin were healthy. I recommended it to be removed, but do not know whether this was done or not.

1124. Voigtel, Conradi, J. F. Meckel, Otto and others, have published many interesting facts connected with the history of *manifold horny productions*. In the collection of the Ecole de Médecine at Paris, the hands and feet of an old woman, presented by Beclard, are preserved, which are covered with horny lamellæ of different sizes. The backs of these parts are covered with horny productions of less length than those of the palms and soles. From the latter arise five or six excrescences, as thick as the finger, and from eight to ten inches in length.

These productions are extremely friable. They demonstrate the analogy of the substance of proper horn to the epidermis. The mode of connection of these multiple horny productions with the skin, is less known than that of the single horns of which particular mention is made above (§§ 1117-1118).

1125. The causes of horny productions are extremely obscure; they appear most generally to follow some chronic irritation of the papillæ.

1126. The form, colour, and especially the consistence and structure of these productions, and the smell they exhale in burning, distinguish them sufficiently from the hard, dry, and pyramidal-shaped incrustations, which occasionally cover syphilitic, scrofulous and cancerous ulcers. These horns are still more distinct from fungous tumours of the dura mater, from nodes of the bones, &c., with which they have been said occasionally to have been confounded. Bony appendages or spiculæ of the femur, humerus, &c., similar to those mentioned by Cabrolus, Vicq d'Azyr and others, can never be mistaken for horny productions of the skin, even though they projected to a considerable distance after piercing the skin.

1127. I only know of one case which goes to prove that the spontaneous fall of horny productions may be followed by a permanent cure.<sup>3</sup>

of prey. It adhered firmly, by means of a narrow base, to the skin and subjacent areolar tissue. Dr. Portal removed it by incision; the areolar tissue at its base, the periosteum and bone, were perfectly sound."—Wilson (*op. cit.*).

Mr. Wilson has recently, in vol. xxvii. of the *Medico-Chirurgical Transactions*, contributed a paper,<sup>2</sup> setting forth the mode of production of horn from the skin and giving some statistics of the subject. He remarks:—"The sebaceous substance is secreted from the blood, through the urgency of the cells which contain the epithelial lining of the gland, as is the case probably with all the secretions of the body; but there is this difference between the sebaceous and other secretions, namely, that the former is semi-solid, while the rest are fluid; the solidity or density of the sebaceous matter being due to the great number of empty and more or less distended cells which compose the mass."

Mr. Wilson has collected ninety cases, of which fifty-four were females and thirty-nine males, the sex of the remainder not mentioned. Forty-eight were seated on the head, four on the face, four on the nose, eleven on the thigh, three on the leg and foot, six on the back, five on the glans penis, and nine on the trunk of the body. Old age seems to be a predisposing cause of this affection.

When it is held necessary to remove these horny productions, on account of the inconvenience or deformity they occasion, the knife is always to be preferred to every form of caustic application. After including the base of the formation within a circular or elliptical incision, it is necessary to dissect away, or to destroy, by means of escharotics, the follicular pouch, the warty excrescence, &c., from which they spring. When this precaution is neglected, or when these productions are simply cut across at their bases, or removed with a ligature, they are very apt to grow again.

Little has yet been done in trying to subdue the particular disposition manifested by certain individuals to have horny growths developed upon the surface of their bodies. Fabricius Hildanus<sup>4</sup> tells us that a young female, having made use of evacuates, emmenagogues and the sulphureo-aluminous thermal waters of Neuham, was cured for a time of these horny productions with which her skin was covered. The combined action of simple tepid, of alkaline, and of vapour baths, would probably prove advantageous, if these appendages were found to adhere but slightly to the skin.

#### *Historical Notices and particular Cases.*

1128. In alluding to a horny production springing from the surface of a wart, Morgagni remarks, with justice, that this fact confirms the observations of Malpighi on the part which the papillæ play in the formation of natural horns: "Quid (ait) aliud denique sunt verrucæ nisi productæ morbosæque cutis papillæ?"

Home and Cooper have studied the horny productions developed in the sebaceous follicles. I have already referred to several cases of horny productions, arising from extensive surfaces of the skin, usually after these had been affected with chronic inflammation. Dauxais<sup>5</sup> and Westrumb<sup>6</sup> have quoted an immense number of cases, in which accidental horns were evolved in men and among the lower animals.

#### CORN.

##### *Vocab. Tylosis.*

1129. Corns are accidental circumscribed epidermic indurations, of a round shape and hard consistence, which are commonly evolved on the upper surface, or on the lateral aspects of the toes, occasionally also on the soles of the feet, especially towards the anterior extremities of the metatarsal bones. Corns compress and irritate, and sometimes inflame and even pierce the subjacent skin; they have also been known to cause inflammation in the joints situated underneath them.

1130. *Causes.*—The injurious pressure of tight, short, or ill-made shoes immediately upon the skin, or of the toes upon one another, are the most frequent causes of corns.

1131. Corns are generally shaped like the head of a nail; the cuticle of which they consist is so much thickened, that layer after layer of it may be removed with a knife. In the middle of the yellowish hardened epidermis, a small point, of a white colour, may be perceived, which penetrates more deeply than the other parts of the induration. The slightest pressure over this white point occasions severe pain. This nucleus is sometimes surrounded by a slight ecchymoses, situated in the corion.

Corns of the lateral aspects of the toes are usually situated under the projections formed by the articular heads of the phalanges, upon which, of course, pressure acts more powerfully as well as more continually. They are almost always moist; their centre is depressed, and presents a slight cavity of a grayish tint, that forms a marked contrast with the pearly white which the constant moisture of the feet gives to the thickened cuticular rim that surrounds the corn.

1132. *Bunions, callosities and indurations* are names given to thick-

<sup>4</sup> Cent 2, obs. 25.

<sup>5</sup> Dauxais. Des Cornes. Diss. inaug. Paris, 1820.

<sup>6</sup> Westrumb. Sur le développement des productions cornées. Journ. complém., t. xxxii. p. 331.

Ant. Piccinelli Sull'origine e cura di quelle escrescenze impropriamente chiamate corne umane, 4to. Bergamo, 1826, may also be consulted.

<sup>1</sup> Il Filiatre, Sebezio, February, 1842.

<sup>2</sup> Account of a Horn developed from the Human Skin; with observations in the Pathology of Certain Diseases of the Sebaceous Glands.

<sup>3</sup> A case detailed by Roots, quoted by Westrumb.



enings of the cuticle covering the palms of the hands, soles of the feet and joints of the toes. They do not differ from corns, save in being without the central white cone, observed in these last, which, from penetrating deeply, has procured them the title of *clavi pedum*. Pressmen, in printing offices, are liable to indurations of the nature of bunions on certain parts of the palms of their hands, and to painful chaps which are produced by the alkaline leys used for cleaning type. Hard cuticular indurations frequently occur around the heels, on the inner sides of the great toes, on the inferior surface of all the others, and especially over the digital extremity of the first metatarsal bone.

1133. When pieces of integument, affected with corns, are macerated for some time, the thickened epidermic layers are seen to have depressed and altered the corion beneath them. The central nucleus, firmer and more horny than any other part, is almost always distinct.

M. Blandin<sup>1</sup> believes that corns are always formed by a kind of hypertrophy of the superficial lamina cornea seu albida of the skin, and that the thickening of the cuticle observed at the same time is entirely accessory.

1134. Corns may be prevented by wearing easy shoes. These are essential to persons who by their avocations are required to walk a great deal. These individuals ought also to rub their toes with a little tallow, as well as to grease the ends of their stockings, and those points which are in contact with the projecting parts of the foot.

The acute pain produced by corns may be appeased for some time at least, by cutting away the exuberant parts of these productions with a sharp knife. The eye of the corn may sometimes be picked out with the nails after soaking the foot in warm water, or softening the induration by the application of a soft cataplasm, or a piece of diachylon plaster, &c. Two or three operations of this kind, at the distance of a fortnight or three weeks from one another, occasionally suffice to remove the evil entirely. A blunt needle, fixed into a handle, is an excellent instrument for working out these central nuclei. The part should afterwards be anointed with a little mutton suet and covered with a bit of soap or diachylon plaster.

Plasters of soap, of mucilage, of gum ammoniacum, of galbanum, various unguents, the leaves of the house-leek, the pith of the rush used by coopers, cotton, fine linen, &c., applied around the toes, will all be found useful in treating corns of the feet, provided the sufferer at the same time reforms his boots and shoes in the essential point of size. It is not without great advantage either, that the central nuclei of corns are preserved from pressure, by being covered with a piece of thickish soft leather spread on one side with diachylon and pierced in its centre with a hole of a size corresponding to that of the nucleus to be defended. Sir A. Carlisle proposes the above means of dressing, continued during about six weeks, as a simple and very effectual plan of cure.

Corns have also been destroyed by being rubbed with caustic potash, nitrate of silver, muriate of antimony, nitric acid, &c. These agents are attended with many inconveniences in inexperienced hands, and excision appears to be preferable.

#### Historical Notices.

1135. Corns were described very long ago.<sup>2</sup> Rousselot,<sup>3</sup> Lion,<sup>4</sup> and Carlisle,<sup>5</sup> have studied them particularly in modern times.

#### HYPERTROPHY OF THE VASCULAR ELEMENTS OF THE SKIN.

1136. The vascular tissue of the skin occasionally acquires preternatural enlargement. In one case the superficial veins become extremely apparent, ramifying in large branches in situations where none are usually seen (*Phlebectasia*); in another instance, but much more rarely, the skin presents small red spots, formed by extremely

delicate and almost capillary arborizations, *angiectasia capillaris* in a third set of cases, violet or purple covered stains appear upon the skin (*mother marks*) or bloody tumours, the centre or a considerable portion of the surface of which exhibits no vascular ramifications, at least when viewed with the naked eye, but whose circumference generally presents a remarkable vascular net-work, or numerous branches of dilated veins.

1137. *Phlebectasia*, or simple dilatation of the veins, has been most frequently observed on the nose, in consequence of rosacea of long standing, or of a preternatural enlargement of this part, somewhat analogous to Arabian elephantiasis in its nature. The veins occasionally acquire a very considerable size, and form very strongly marked bluish lines on either side of the nose. I have observed this dilatation of the veins in individuals of mature age without any other alteration of the nose.

In those individuals who are affected with enlarged veins of the legs, the skin of the instep and inferior inner part of the leg often presents bluish arborizations, produced by some dilated venous twigs. One of the consequences of ascites, and of pregnancy, is occasionally a dilatation of the superficial veins of the skin as well as an enlargement of the principal trunks of the lower extremities.

1138. Under the name of *capillary angiectasia*, I would designate those vascular spots or patches of various magnitudes, ramified on the surface, not prominent, and of a reddish or rose colour, different from the violet tint of the spots occasioned by dilatation of the veins. This variety of blood-mark may be congenital or accidental.

1139. Under the title of *nævus araneus* certain small congenital, reddish, arborescent spots, of the size of a sixpenny piece or less, have been described; these disappear on pressure; and very seldom occur singly, being frequently scattered over the whole of a limb or region of the body. These marks differ from certain other congenital spots which are occasionally observed on the forehead, the eyelids, &c., the uniform red tint of which has caused them to be compared to a ripe cherry. This last species of spot is frequently prominent.

1140. There is a kind of red arborescent spot, of which I have met with but one instance, that bears a great analogy to the *nævus araneus*.

A woman, thirty years of age, of good constitution, who had long been an inhabitant of New Orleans, came to consult me on account of some spots of the description alluded to, which had made their appearance on one foot and on both legs about nine years previously, some months later on the hands and thighs, and very recently on the abdomen. At first sight I took the spots she showed me for *spider nævi*; but the woman assured me that they were accidental, and that they increased every year in the spring season. The smallest of them could be covered with the head of a large pin; the largest did not quite equal a sixpence in size; the whole were covered with vascular ramifications; but were without heat, unaffected with pruritus, and the seat of no desquamation of the cuticle. Neither the father nor mother of this person was affected with similar spots. She had been married at an early age, and had had nine children, five of whom had died in infancy. For the last four or five years the menstrual discharge had been scanty, and she was a good deal troubled with leucorrhœa, but she enjoyed habitual good health notwithstanding this. In the hope of discussing the marks in question, the anti-scorbutic syrup, with the addition of bichloride of mercury, the Barèges baths, and baths with the addition of sulphate of iron, had been made use of, but unsuccessfully. I recommended a trial of astringent baths, and local styptic applications with no better success.

In the Hôpital de la Charité, I once saw a woman, on the back of whose foot and lower part of whose leg there was a *reddish blotch*, which disappeared under pressure, and returned immediately, and was evidently connected with an extraordinary development of the minute blood-vessels of the skin. This woman had no varices of the legs, and felt neither unusual heat nor itching nor smarting in the part affected. She had been aware of the existence of the red mark for a great many years.

1141. Under the title of *nævi flammei* or *port-wine marks*, flat stains, marks or blotches of various shades of colour have long been designated. These are sometimes of the shade of port-wine or claret, and sometimes of the stain produced on the skin by the raspberry or black

<sup>1</sup> Anat. Topog. Svo. Paris, 1826, p. 681.

<sup>2</sup> Celsus. De re medicâ, lib. v. sect. xxviii. 14.

<sup>3</sup> Rousselot. Méthode certaine sur le traitement des cors. La Haye, 1762.

<sup>4</sup> Lion (H.). Treatise upon spineæ pedum, with plates. London, 1802.

<sup>5</sup> Carlisle. Obs. on the nature of corns. Medic. Facts and Observations.—Rec. périod. de littérat. médic. étrang., t. ii. p. 142.



current. They all become deeper in colour under the influence of those causes which accelerate the circulation, such as violent exercise, hot rooms, the use of strong liquors or stimulating food, affections of the mind, and in women the approach of the menstrual period. The portion of skin affected with this kind of nævus is little or not at all thickened or swelled. The surface of the spot is in one case smooth, in another more or less uneven and sometimes even shagreened and mammillated. The blood-vessels distributed to these congenital marks are occasionally of considerable size. Alibert has described and figured a case of nævus *flammeus* under the name of *ecchymome congenital*.

These nævi *flammei* occasionally extend from the skin to the neighbouring mucous membranes: in a man of the name of Petit Jean, who was received into the Hôpital de la Pitié, on the 16th of November, 1826, on account of pulmonary catarrh, one of these nævi was observed occupying the left half of the upper lip, and spreading from thence over the mucous membrane of the same side of the mouth. The temporal, malar and palpebral regions of the left side were also beset with irregularly circumscribed congenital spots, of the colour of wine lees, the skin between them being healthy. These spots did not rise above the level of the skin, did not disappear under pressure, and were unaffected with any unpleasant sensation. When the patient grazed any of these spots with the razor in shaving, he had always great difficulty in arresting the hemorrhage. Under the lower eyelid there were two small red vascular tumours about two lines apart, as large as grape-stones, soft, and capable of being flattened, and made to diminish in size with pressure. These two little tumours had arisen about two years previously after slight wounds. The skin around their bases was redder, and more evidently raised than it was about any of the larger spots.

Nævi *flammei* are occasionally only observed on one side of the body, as in the above instance. I have, however, seen a more remarkable one in the person of a man twenty-four years of age, the whole of the right side of whose body, including the right arm and leg, was covered with thickly set and in some places confluent spots of a vinous red colour. The colour of these spots did not become paler with pressure; but was evidently deepened under the influence of bodily exercise, exposure to an elevated temperature, &c. The subcutaneous veins of the right side generally were extremely large; the mucous membrane of the right side of the mouth was also occupied by several spots of a ruddy violet colour. The gums of this side looked swollen and more vascular than usual.

1142. These *cutaneous* vascular nævi left to themselves may long continue stationary. When they happen to become inflamed, they are apt to ulcerate; and the sores that result are never healed but with great difficulty. E \* \* D \* \* was born with an extensive vascular nævus of the right forearm and hand. It did not rise sensibly above the level of the healthy skin that surrounded it. It was of a violet colour, and deepest upon the hand. Five weeks after birth this nævus was affected with inflammation in several places, which all gave way and became open ulcers. These spread gradually, became united, and at length occupied the whole surface of the preternatural formation. The extensive ulcer that now resulted discharged considerable quantities of blood and purulent matter, and only began to heal in different places, towards the age of five months. The hand and forearm not having been kept upon a horizontal split, as cicatrization advanced, were gradually drawn towards one another, and the cicatrice finally assumed the appearance of a thick hard band of the same nature as those that follow burns, extending from the breast along the anterior margin of the axilla, down the inner aspect of the arm and forearm, turning over the outer edge of which last, it gained the back of the hand, where it divided into several branches spreading downwards to the backs of the fingers, and upwards to the posterior and outer surface of the forearm, &c. The hand is consequently fixed in a state of extreme extension upon the forearm; this remains in a semiflexed position on the arm, and the arm itself cannot be brought into complete abduction.

M. Sabatier once showed me a child at the breast affected with a cutaneous vascular nævus, situated on the inner aspect of the left thigh, ulcerated in several points, and presenting numbers of small cicatrices in others.

1143. Under the name of *vascular growth* of the skin I would indicate a rare and little known affection, characterized by small red persistent vascular elevations, scattered and isolated, or clustered together, scarcely rising above the level of the integument in the first instance, but subsequently attaining one or more lines in length, and then forming true *excrecences*.

1144. These vascular growths, the etiology of which is extremely obscure, are commonly evolved on the face. Few in number and isolated at first, they occasionally become confluent in consequence of several successive eruptions. They often continue stationary during a long course of years; but in some cases they become extremely numerous in a short space of time, without any appreciable cause. When these vascular growths are dispersed over the skin, this tissue generally preserves its natural colour in the spaces between them; but it acquires a reddish tint similar to that of nævus *flammeus* when they are very numerous and much crowded together. Pricked with a pin the vascular growths in question pour out a drop of blood; cut into, the hemorrhage that follows is rather considerable.

1145. When these vascular excrecences are situated on the extremities, they are seldom numerous; and as they occasion neither inconvenience nor visible deformity, individuals affected with this slight alteration of the skin do not generally resort to medical assistance; but when they occur in great numbers on the face, there are few who do not seek advice on account of the deformity which then ensues; for the affection not only shows no disposition to improve, but on the contrary gets continually worse.

1146. Styptic lotions, successfully employed against syphilitic excrecences, are unavailing in the description of the case at present under review. Vascular excrecences, as they scarcely rise above the level of the skin and have uniformly broad bases, cannot be attacked with the ligature. Excision and cauterization to be of any service must interest the whole thickness of the skin, in which case puckered cicatrices and a great deal of deformity ensue. Convinced by experience of the inutility of these surgical measures, I tried the effect of the bichloride of gold and soda, the action of which is so powerful in cases of syphilitic excrecences, whose organization appears every way as perfect as that of the vascular growths we are considering, but without any success.

CASE CLXXIV.—*Vascular elevations and excrecences of the skin.* Booklage, a German by birth, twenty-seven years of age, and of a lymphatic temperament, entered the Hôpital de la Charité on the 16th of March, 1827, on account of a slight gastro-intestinal inflammatory affection, which gave way in the course of a few days to antiphlogistic treatment.

This man also laboured under an extremely rare affection of the skin of the face, characterized by small vascular elevations and excrecences. The patient is not aware that this affection arose under the influence of any particular cause; he only remembers having been told by his parents that it was not born with him, but made its appearance about the third year of his age. The excrecences, scattered at first pretty evenly over the face, by coalescing in a greater degree in one place than another, now form three principal bands. They are red, and appear completely vascular; they shrink and become pale under pressure, but instantly return to their former size and colour, when the finger is removed. The smallest of them, of the size of a pin's head, scarcely rises above the level of the skin, and is of a pale rose-colour; the largest are globular in form, three or four lines in diameter; but several are filiform, especially such as are situated about the alæ of the nose. Several of the excrecences grow from the free edges of the lips, but there are none on their inner surface nor around the orifice of the nostrils. On the gums of the upper jaw there are a number of small elevations and excrecences of the same colour as the general lining membrane of the mouth; the prominent angles of the gums that lie between the several teeth are loose and movable. The forehead, ears, and eyelids are free from excrecences; the base of the nose is covered with them; they become gradually fewer and fewer in number towards the root, where there are none. The skin of this member is red, as in cutaneous vascular nævi generally. There are no vascular excrecences on the neck, but three small cutaneous appendages, two lines in length, are there perceived. On the back there are several appendages of the same description; and both



on the upper and lower extremities there are a few small tubercles of the form and magnitude of a split pea scattered about.

On the 2d of April, I touched five or six excrescences situated close to the left side of the nose, with sulphuric acid, and a cluster of eight or ten others, situated on the chin, with nitric acid. Neither of these applications was complained of as extremely painful.

The excrescences thus treated were detached spontaneously on the 18th; the cicatrice was even, not at all conspicuous, and nearly of the colour of the skin. I therefore determined immediately to touch the whole of a warty-looking band, which ran transversely between the chin and the under lip, with the nitric acid. This application destroyed the excrescences, but it interested the skin through its whole substance. The patient had for some time rubbed in the bichloride of gold and soda under the tongue, in quantities successively of a twentieth, a tenth, a fifth, a quarter, and a third of a grain, but without any evident influence whatever.

CASE CLXXV.—*Vascular tumours and excrescences of the face.* I was consulted for an affection similar to the last which had made its appearance in the spring of the year 1816, in a young man then in the twelfth year of his age, of a sanguine temperament and well formed. The red and enduring globular elevations which characterized the affection, had appeared at first on the chin, and about the furrow which runs between the *alæ nasi* and the face, and on the cheeks, especially on that of the right side. From the year 1817 to 1826, these growths had scarcely been observed to increase either in number or in size. At the latter date, they were red, grew pale upon pressure, and bled profusely when one of them happened to be touched by the razor in shaving; pressure was the only means of arresting the hemorrhage.

Alcoholic and acid washes had been fruitlessly employed with a view of discussing these excrescences. I proposed to destroy them by the use of the potential cautery, but the patient having expressed great repugnance to this measure, I did not urge it; the disease was trifling in extent.

1147. Cutaneous vascular *nævi* frequently occur under the form of red grains or small ovoidal tumours, pediculated, or with bases which blend insensibly with the skin that surrounds them. This variety of *nævus* appears at first in the guise of one or several spots of a rosy or red colour of varying intensity of shade, which children bring into the world with them. These spots are generally of trifling extent, and often bear a great resemblance to flea bites. They frequently continue stationary for several years, and only begin to enlarge in some cases about the age of puberty, or during an attack of dysmenorrhœa in females; more generally, however, they extend both in breadth and depth from the very first, acquire a darker colour, and are gradually changed into red, uneven and irregularly circumscribed tumours, compressible and elastic, less tense when the individual affected with them is in a state of repose than when he cries or moves actively, indolent, without inflammation, and generally exhibiting nothing like pulsation, unless when they happen to lie over large arteries. These vascular tumours have been especially observed upon the forehead, about the root of the nose, on the eyelids, lips, lobe of the ear, labia majora, shoulder, and over the sternum. They commonly grow less rapidly than the vascular tumours of the same description accidentally evolved after birth.

1148. Subcutaneous vascular *nævi* occur more frequently on the face than on other regions. The size of these tumours is diminished by pressure, and increases under efforts, exercise, crying, &c.; but they do not pulsate, like aneurism, by anastomosis.

1149. Congenital cutaneous and subcutaneous vascular tumours are characterized by a preternatural development of a point of the vascular network of the skin or subcutaneous cellular tissue. Two species are admitted; *erectile* tumours, and *varicose* tumours.

1st. Those vascular tumours which consist of *erectile tissue* (Dupuytren), whether evolved as a consequence of a bruise or blow, or independently of any assignable cause, are of a reddish or brownish colour, and generally granular on the surface. Their base is commonly broad, implanted in the skin and subcutaneous cellular tissue, and even penetrating between the muscles; they communicate a peculiar jar to the hand applied to them, as if the obscure rushing of a fluid were felt, and dilate and contract synchronously with the diastole and systole of the heart.

This pulsation is generally particularly obvious at their bases. Soft to the touch, when nothing irritates them, very slight stimuli cause them to increase remarkably, and to become extremely firm; when wounded, the hemorrhage is always profuse, and stopped with difficulty. These vascular tumours never disappear spontaneously; they tend, on the contrary, constantly to increase, to spread into new parts, and to disorganize these in their own peculiar manner. Having attained a great degree of development, these erectile tumours have been known to give way on the surface, to form the bases of enormous fungiform growths, and to give rise to hemorrhage so incessantly repeated and so profuse, as to cause the speedy death of the individual affected.

Vascular tumours, consisting of erectile tissue, generally begin in the subcutaneous cellular substance of the lips, eyelids,<sup>1</sup> inner aspects of the arms and thighs, of the breasts, lobes of the ears, palms of the hands,<sup>2</sup> cheeks, &c., appearing at first in the shape of small, movable, indolent, and elastic red tumours, the progress of which is usually slow, if it be not accelerated by violent efforts, convulsions, and so on. The skin is for the most part only consecutively affected; the disease finally gains the characters that have been indicated.

Tumours of this description form well-defined masses of various sizes, covered occasionally with a thin fibrous envelop, presenting internally the appearance of a cellular or spongy cavity, consisting, in fact, of an inextricable plexus of mingled arteries and veins, communicating by innumerable anastomoses like the capillary vessels, but of much larger size than these. The veins are readily injected from any of the surrounding branches; injection penetrates with greater difficulty into the arteries. When these tumours only implicate the skin and subcutaneous cellular membrane, the neighbouring muscles are simply pushed aside without being altered in their structure. But the muscles very generally participate in the morbid change of structure. The large vessels running in the vicinity of such tumours are generally free from alteration. (a)

(a) *Nævus, or vascular or erectile tumour*, is so well and tersely described by Mr. Miller (*Principles of Surgery*), that I must introduce his remarks in this place.

"The term denotes a diseased formation, in which the vascular tissue bears the most prominent part. There are varieties of such adventitious structure. 1. The capillaries of a portion of integument may be equably and permanently dilated; producing discoloration, and but slight elevation of the affected part. Bleeding is copious from any breach of its surface, by ulcer, or by wound. This is one form of *nævus*, or congenital mark; an affection of no danger, and but little inconvenience; which may be looked upon as rather a deformity than a disease. 2. The structure may consist chiefly of dilated veins; not over-distended, and mere passive tubes, as in varix; but retentive of tone, and energy of function; fed by arterial branches, of somewhat corresponding size and activity; yet the latter tissue holding but a comparatively subordinate part in the development of the tumour. This morbid structure is not found in the substance of the true skin, like the preceding, but in the subjacent cellular tissue; of various size and prominence; causing a doughy elastic swelling, of a livid hue—the venous structure appearing with tolerable distinctness through the superimposed integument. If breach of surface take place, the hemorrhage is profuse, and chiefly of the venous character; capable of being arrested by pressure, without much difficulty. If an incision pervade the mass to any considerable extent, arterial branches are found spouting with much activity; still the main stream is dark and venous. Or the tumour may be submucous; as exemplified by one kind of hæmorrhoid, situated partly within and partly without the verge of the anus.

"3. The third form of swelling is composed chiefly of dilated and active arteries; supplied with large tortuous veins, placed in the vicinity; the principal mass consisting of the changed arterial tissue; the veins not properly constituting any part of this, but being rather the mere conduits whereby the arterial contents are conveyed back into the general circulation. Also, in the neighbourhood, are to be

<sup>1</sup> Mackenzie. On the Diseases of the Eye, 8vo. London, 1830.

<sup>2</sup> Rognetta. Mém. sur les tumeurs sanguines et lipomatenses de la paume de la main. (Gazette médicale de Paris, 5 Avril, 1834.)



2d. On the palms of the hands particularly, but also on other regions of the body, we occasionally observe soft bluish-coloured tumours, formed by a plexus of dilated veins. These vascular tumours diminish under the influence of cold, the application of ice, and compression. They are much rarer than the species which has just been described.

1150. *Causes*.—The causes of vascular nœvi, and the mode in which they are formed, are little known. The vulgar opinion which attributes these alterations of the tissue of the skin, &c., to the influence of moral affections of the mother, reckons but few supporters in the present day. Chaussier has made the remark that nœvi were more frequent among those infants whose mothers were subject to chronic inflammation of the skin.

The etiology of all the other varieties of accidental sanguineous blotches, excrescences, and tumours, is also extremely obscure.

1151. *Diagnosis*.—Vascular marks, excrescences, and tumours, have external characters so striking, that they are not liable to be confounded with any other form of cutaneous affection. Cutaneous and subcutaneous vascular tumours differ from vascular nœvi in regard

found the feeding arteries; originally twigs, now enlarged to trunks; pulsating strongly, and obviously carrying on a plentiful and active supply. The mass may be subcutaneous; constituting the true aneurism by anastomosis or erectile tumour; varying in bulk and tension, according as the circulation is sluggish or excited; compressible; elastic to the touch, and indicating its tubular structure on being pinched or rubbed when in the flaccid state; of a reddish hue; in some parts tending to liver, but not continuously so, as in the preceding form of tumour. Or it may be submucous; constituting the most frequent form of internal hæmorrhoid. The structure is analogous to the normal erectile tissue; but with this difference, that whereas in the normal, there are periods of complete repose and collapse, tension and fulness occurring but occasionally by local determination—in the morbid, there are never utter flaccidity and repose. The tumour is more full and tense at one time than at another; yet at all times is full and active; evincing an undulatory movement, if not actual pulsation. Strictly speaking, there is no aneurism here; but rather a simple exaggeration of arterial tissue and function; no degeneration of coats, but simply dilatation; and yet not dilatation alone, but corresponding increase of function as well. The morbid formation may supervene at any period of life; but most frequently it is congenital; and, growing faster than the normal structures around, claims our attention at an early age. The most common situations are, beneath the integuments of the face, head, and neck; not unfrequently it forms on the hands and feet. The tumour pulsates synchronously with the heart's action; but much less distinctly, and with less expansion, than the true aneurism; it may be considerably diminished by equable and sustained pressure, resuming its wonted bulk on removal of the pressure; a bruit is heard, dull and rough, and sometimes associated with a vibratory thrill. At first the skin is free; ultimately it becomes involved in the morbid structure, and incorporated with the general mass. Sometimes the growth is slow; sometimes, and more frequently, rapid. In all cases, bulk is temporarily increased by mental excitement, muscular exertion, and whatever suddenly and much excites the circulation. The tumour having become superficial by involvement of the skin, ulceration is likely to occur; and hæmorrhage follows, profuse, and not easily restrained; demanding active interference, otherwise, by repetition or continuance, it may exhaust the patient. Or the ulceration may have a salutary result; if surrounded and preceded by fibrinous exudation, the vascular structure may be consolidated, no bleeding taking place, even from an acute and wide ulcer; and this consolidation advancing as the ulcer spreads, so as invariably to precede and surround the breach, the adventitious structure may be altogether got rid of, partly by obliteration, partly by ulcerative loss of substance. Sometimes hæmorrhage is vicarious in the female adult, taking the place of the menstrual discharge; the tumour becomes tense and full at the return of each period; a small fissure, or sore, forms in the skin, and from this the blood slowly distils; such bleeding is seldom dangerous, or even excessive, and is not to be suddenly arrested, without means having been duly taken to secure return of the normal discharge."

to the circumstances in which they are evolved. Tumours of erectile tissue do not, like varicose tumours, exhibit any dilated veins in their circumference. Vascular tumours, uneven on the surface, clastic, and of fungiform consistency, even at their base, are easily distinguished from abscesses of every description. It is, however, occasionally difficult to ascertain the extent of these tumours, for they frequently send prolongations deeply among the muscles, which are not indicated externally. Professor Boyer has related two remarkable instances of this anatomical disposition.

1152. *Prognosis*.—Vascular stains and excrescences are never affections of much consequence in themselves. The case is very different in regard to congenital or accidental vascular tumours of the skin, especially to those consisting of erectile tissue. Left to themselves, they seldom continue stationary; and when they have attained dimensions at all considerable, they can only be remedied by operations often of doubtful success, and sometimes extremely dangerous.

1153. *Treatment*.—Compression, cold, and styptic applications, cauterization, artificial inflammation, the ligature used variously to the tumour itself or to the principal vessel that supplies it, and excision with the knife, have all been proposed for the cure of vascular tumours.

After a careful review of almost all the cases of vascular or erectile tumours published up to the present time, and a comparison of the histories of these with the circumstances attending a great many others which he himself had seen both in England and in France, Mr. Tarral, in an excellent paper published in the *Archives générales de Médecine*, has given a summary of the different modes of treatment which have been proposed in these affections, the advantages or disadvantages of each, and the peculiar circumstances in which they are severally applicable.<sup>1</sup>

*Compression* acts slowly, and cannot be had recourse to with advantage, or any likelihood of its proving successful save when the tumours lie over hard parts, which may be made to serve as points of support. Compression, to be decidedly useful, must also be applied with sufficient force to the whole extent and even to the parts beyond the circumference of the tumour.<sup>2</sup> The combined action of *cold*, *compression*, and *styptic applications*, as recommended by Mr. Abernethy, is not generally deserving of much confidence.<sup>3</sup>

The *ligature* was employed with success by M. A. Petit<sup>4</sup> for pediculated vascular tumours. John Bell and White<sup>5</sup> have recommended a needle armed with a double thread of strong silk to be passed deeply under and across the whole mass of the tumour, and one half of it to be included within each of the threads. This plan of treatment is painful, and less certain in its effects than *excision*,<sup>6</sup> which is the method usually adopted for the removal of vascular tumours of erectile tissue. It is also the kind of operation which, numerically considered, has been attended with the greatest amount of success, although, truth to say, it has occasionally been followed by alarming and even fatal hæmorrhage.

1154. Certain species of nœvi have been named as best attacked with the actual, or with the potential cautery. Quick lime has been recommended by one,<sup>7</sup> caustic potash by another (Græfe), and nitrate of silver by a third. Mr. Tarral has given a great number of cases which show incontestably, that simple cauterization of the more superficial parts of these tumours, may be had recourse to with frequent success; that by this means the smaller of them often disappear, apparently from the direct action of the escharotic thus applied, and that even the larger may by this means have their vessels obliterated and their vitality so much altered as to shrink and gradually to vanish. When the tumours are large, repeated cauterization is practised; the operation causes little pain. Wardrop,<sup>8</sup> who was the first to propose

<sup>1</sup> Tarral (Claudius). Du traitement des tumeurs érectiles et particulièrement du traitement par la caustique. (*Archives générales de Médecine*, Septembre et Octobre, 1834.)

<sup>2</sup> Boyer quotes a remarkable case of the cure of a nœvus of the upper lip and septum of the nose obtained by pressure almost unremitting kept up by the mother of the child (*Traité des Mal. Chirurg.*, vol. ii. p. 269); M. Roux succeeded in curing another similar case by the same means.

<sup>3</sup> Abernethy's *Surgical Works*, vol. ii. p. 220. London, 1819.

<sup>4</sup> Petit (M. A.) cited by Saviard. *Obs. chir.*, p. 515, obs. 114. Paris, 1700.

<sup>5</sup> White. *Medic. Chir. Trans.*, vol. xiii. 1827. *Arch. gén. de méd.*, t. xvii. p. 445.

<sup>6</sup> Petit (J. L.). *Œuvres chir.*, t. i.—Bell (J.). *Surg. Works*, vol. i. 4to. Edinb., 1801.

<sup>7</sup> Callisen. *Syst. chir. hodiern.*, vol. ii. p. 202.

<sup>8</sup> Wardrop. *Lancet*, London, 1827.



and to practice this mode of using caustic in bloody nævus, tells us, that he had never known the application followed by hemorrhage, and further, that its employment had been uniformly successful.

With a view of exciting inflammation in these tumours, we have been inclined to inoculate vaccine matter upon their surfaces.<sup>1</sup> Several cases are also quoted of cures performed by means of the ointment of tartrate of antimony,<sup>2</sup> rubbed into them; and this plan has the advantage over the former of being applicable to those who have already had cow-pox and small-pox.

Mr. Lawrence has proposed to pass a seton through large tumours of erectile tissue.<sup>3</sup> And Mr. Lloyd<sup>4</sup> has spoken of injecting them with a fluid containing from three to six drops of nitric acid to a drachm of water, care being taken to compress the circumference of the tumour, during the operation. Dr. Marshall Hall<sup>5</sup> has recommended a cataract needle with cutting edges to be plunged into these tumours, and their substance to be traversed in eight or ten different directions without withdrawing the instrument or perforating the skin anew.

Of all these modes of treating vascular tumours, the plan of Mr. Wardrop appears to me the best.

More than one excellent surgeon has further proposed and even practised the ligature of the principal arterial trunk whose branches are distributed to these tumours.<sup>6</sup> This operation has been imagined with especial reference to erectile tumours evolved in the orbit, and those situations in which they are inaccessible by any of the other means already enumerated, as well as to such as, from their immense extent, and the importance of the parts among which they penetrate, cannot properly be attacked with caustic, the ligature or the knife. It has also occasionally been performed as a preliminary to the removal of these tumours, and as a means of controlling hemorrhage, and sometimes only as a palliative, and to prolong for a time the life of the patient hourly threatened by the progress of the disease. (a)

(a) Of the different modes of treating nævi described in the text, that by ligature is preferable in most cases in which an operation is deemed necessary. I have, myself, repeatedly succeeded in removing these congenital tumours by applying tartar emetic plaster over them, and keeping it on sufficiently long to cause free pustulation and ulceration.

If the caustic, potassa fusa, for example, be used to produce ulceration, it ought to be rubbed lightly, so as not to produce a large eschar, the separation of which would likely be followed by hemorrhage.

The method by excision is spoken of in the text, in terms of more decided approbation than surgeons generally use when speaking of it. Mr. Miller will, we believe, be found to express the prevailing opinion on this point, when he says: "Excision, so applicable to tumours in general, is inexpedient; the extent and activity of the component vascular tissue render that mode of removal in the highest degree perilous. To cut into the texture of such a tumour, when large and pulsating, would be madness; the gush of blood might prove almost instantly fatal. To cut even wide of the diseased texture, is not always a matter of safety; unless the knife move cautiously, and the forceps and ligature follow nimbly after, the loss of blood will still be dangerous. The mode of removal by excision, therefore, must be limited to those tumours which are small—not larger than a prune—of no unusual activity, not fed by large and numerous arterial trunks, so situated as to admit of the incisions being made wide of the diseased structure, and also in a locality favourable for the use of the ordinary means of restraining hemorrhage. In all other cases, the ligature is preferable."

The operation by ligature is thus briefly described by Mr. Miller. "A needle is passed beneath the mass, carrying a stout ligature; the needle is withdrawn, and the ligature left; its noose having been cut,

<sup>1</sup> Hodgson, of Birmingham, (Medico-Chirurgical Review, t. vii. p. 280, 1827.)

<sup>2</sup> Young, of Glasgow (Glasgow Medical Journal, t. i. p. 93, 1828).

<sup>3</sup> Lawrence. Lancel, 1831, p. 162.—Macilwain. On deep-seated nævi, Med. Chir. Transact., vol. xviii. p. 1, p. 189, 1833.—Gaz. méd. de Paris, 25 janvier, 1834, p. 54.

<sup>4</sup> Lloyd. Cited by M. Tarral. (Mém. cité, p. 209.)

<sup>5</sup> Marshall Hall. Lond. Med. Gaz., vol. vii. p. 557.

<sup>6</sup> Travers. Medic. Chir. Transact., vol. ii. p. 1. London, 1809.—Dupuytren, cited by M. Breschet. Traduction de Hodgson, sur les maladies des artères et des veines, &c. Paris, 1819.

### Historical Notices.

1155. Vascular spots, and tumours of erectile tissue were observed at a very early period. But it is only since the writings of John Louis Petit threw light on their true nature, that really important researches have been instituted with regard to their structure and their treatment. For further information on this subject, I beg to refer to the works of the celebrated surgeons of our day, to those particularly quoted below,<sup>1</sup> and to the excellent paper of Mr. Tarral, already mentioned.

### CHELOID TUMOUR.

Vocab. Art. *Cancroid, and Keloid tumour.*

1156. Under the name of *Keloïde* or *Cancroïde* is described a species of oval or cylindrical-shaped tumour of a permanent character, reddish colour, sometimes with a smooth, but often presenting a wrinkled surface, of a hard and firm consistence, without pulsation or rushing in the interior, slightly prominent, spreading in flat patches, or sending off from the circumference cylindrical or ovoidal prolongations, which have been likened to the claws of a crab.

1157. *Symptoms.*—The appearance of this description of tumour is not the same at its commencement as it is at a subsequent period of its growth. There arises at first on some point of the healthy skin, and still more frequently on the cicatrice of a phlyzacious pustule, of a wound, a burn, &c., a reddish point, of the form and dimensions of a grain of barley. This point is occasionally affected with pruritus of a pretty severe description. Several of these points have been seen arising simultaneously on different parts of the skin which had been irritated by the previous development of phlyzacious pustules. I have, for instance, seen them occurring on the face after confluent small-pox, and in the course of a few months acquiring all the characters proper to the cheloid tumour in its radiated or completely developed form.

When the cheloid tumour is examined with care in the first stages of its growth, and when it does not yet exceed a small hazelnut or

each portion is tied separately on either aspect, so as to include the whole of the morbid tissue; pulling with as tight a strain as the ligature will bear, in order at once to kill the included part, and save both time and pain. If the swelling be circumscribed and prominent, this mode of deligation will be found very suitable; if diffuse, a second needle and ligature may be passed at right angles to the first, and managed in a similar way; the tumour then being secured by four nooses instead of two. Or, if too flat and spread for even this, two hare-lip pins are passed beneath the base, at right angles to each other, and left permanently there, each extremity of each needle protruding somewhat beyond the integument; then a stout ligature is thrown around the whole mass and drawn tightly, secured beneath the protruding ends of the needles; in this way, the noose is made to embrace the whole of the diseased formation. In whichever way deligation is employed, it is often necessary, in the case of large tumours, to make a fresh application within a few days after the first, in order to expedite the sphacelation. But in all cases in which the integument is uninvolved, the use of knife and ligature may be happily combined; the former being employed, in the first place, to reflect the integument in flaps, and thus to expose the diseased structure naked and defenceless to the needle and ligature. In this way, strangulation is effected much more effectually; the part is killed at once, and soon sloughs away. The flaps are then reposed; and, in consequence, not only is the process of cure by granulation abbreviated, but loss of substance saved, and consequently less cicatrix and deformity occasioned:—a point of some considerable importance, when it is remembered that the ordinary sites of the tumour are on the head, face, and neck. Sometimes the morbid structure is so diffuse, as to render inclusion of the whole, by one deligation, impracticable. In that case, it may be taken away in detachments; the operation being repeated at different parts, successively.<sup>2</sup>

<sup>1</sup> Dupuytren. Clinique Chirurg. de l'Hotel-Dieu, t. iv. p. 1. Paris, 1834.—Dupuytren. Vide méd. opér. de Sabatier, édit. Sanson, t. iii. p. 245. Paris, 1832.—Roux. Dict. de méd. Art. Tumeur.—Tarral. Mém. cit.—Lawrence. Lecture (Lond. Med. Gaz., t. vi. p. 228).



the barrel of a quill in size, according as its shape is ovoid or cylindrical, its surface is found covered with numerous transverse wrinkles. Generally indolent, these formations are commonly unaffected with morbid heat, or pain, and it is very seldom, indeed, that they are the seat of any thing like painful shooting sensations.

Several months, and sometimes many years after their first appearance, these tumours extend in length and acquire something of the form of a finger (*Keloïde cylindracée*, Alibert). The wrinkles of the surface become at the same time more conspicuous; the tumour preserves its hardness unimpaired, and now looks like a kind of tuberosity, flattened at one of its extremities, whilst it appears withered and shrunk at the other. In this state the cheloid tumour is not affected with pulsation; neither does it communicate any thing like a jarring sensation to the hand applied to it, like vascular erectile formations; yet its size is affected by various accidental circumstances; it swells, for instance, under the stimulus of increased temperature, of violent exercise, of the approach of the menstrual period, &c. Cheloid tumours occasionally exhibit very small blood vessels on their surface, and almost always send off arms or radii from their circumference, which give them a very characteristic appearance.

1158. Instead of extending in length only, the small reddish and resisting tumours in which cheloid formations commence, sometimes enlarge in all directions, and acquire a quadrilateral rounded or oval form (*Keloïde ovulaire*, Alibert). The hard and prominent circumference rises unevenly, and the centre appears depressed. The boundaries of the tumour, now distinctly marked, are evident to the eye by the reddish colour of the new formation. This variety of cheloid tumour sends off prolongations from several points of its circumference in the form of cones, which are lost in the substance of the skin at the distance of several lines from the bounding line of the tumour.

When the disease, thus far advanced, is left to itself, after an interval, generally of several months, its central part, or different points of its circumference, appear to become the seat of some new action which causes them to turn soft, to shrivel and wrinkle, and finally to assume the appearance of bands similar to those of the cicatrices that follow burns in the third degree of severity. The progress of the peculiar tumours under consideration is otherwise so slow, the inconveniences they occasion are in general so trifling, that I have known patients refuse to submit to the curative means proposed for their relief.

1159. *Causes*.—I am not aware that cheloid tumours have been observed among children previously to the period of the second dentition. The majority of the cases which have been published, and those I have myself seen, occurred among adults and the aged. Some slight circumscribed local inflammation, a scratch, the alteration of the skin consequent upon small-pox, a burn, &c., seem to prove the usual existing causes of these tumours. Their formation, however, appears to depend further on some peculiar state of the constitution. Although they have been met with in individuals of every variety of temperament, they nevertheless appear to be most frequent among persons of lymphatic constitution.

This kind of formation is rare. I have not met with more than five cases of it in the course of my practice. In three of these the tumour arose over the sternum without assignable cause; in another it occurred on the buttock of an adult upon the cicatrice of an extensive burn which he had received when but a few months old. In the last case I encountered, there were two tumours, one on either cheek; these supervened after small-pox. From the cases recorded by other observers,<sup>1</sup> women appear to be at least as liable to the disease as men. Accident, however, has shown me four men, and only one woman affected with it.

1160. *Diagnosis*.—There is no difficulty in recognizing the cheloid tumour when it has attained any considerable size, whether it appears under the form of a broad, reddish cylindrical crest or ridge, or that of a flattened tumour, sending off prolongations from its circumference, bearing some analogy to the claws of a crab. But the distinguishing features of the small reddish tumours by which these

varieties of the tumour begin in common with syphilitic, scrofulous and cancerous tubercles, and sanguineous nævi, are not so decided as to be at all times readily at once appreciable. Still the cheloid formation, independently of any inference deducible from the most frequent seat of its development, the sternal region, presents characters enough to distinguish it from any other form of cutaneous affection. It is, for instance, harder than the scrofulous cutaneous tubercle even from its first appearance; its wrinkled surface is in obvious contrast with the smoothness and polish of the syphilitic tubercle; cancerous tubercles are usually affected with acute lancinating pains, which never occur in the early stages at least of the cheloid tumour; syphilitic, scrofulous and cancerous tubercles almost always end in ulceration, without, for a time at least, spreading superficially. The cheloid tumour extends, but does not ulcerate. Scrofulous tubercles are moreover peculiar to certain constitutions, and are very frequently accompanied with ulcers, cicatrices and other alterations of a strumous nature. Syphilitic tubercles appear under the form of an eruption; the cheloid is very frequently solitary, and it is much more slowly evolved. Vascular nævi and erectile tumours often present pulsations which are never observed in the cheloid tumour; these are besides soft, compressible, and disappear in a great measure under pressure, whereas the cheloid formation is hard and becomes pale, indeed, under the finger, but does not shrink or diminish sensibly in size.

1161. *Prognosis and treatment*.—Cheloid formations do not seem to have any deleterious influence on the general health. The reddish tubercles by which they begin have a constant disposition to extend; but they only increase with extreme slowness and occasionally continue during life altogether stationary. They have even been seen, after attaining a certain size, to shrink and to disappear either in part or wholly, becoming changed into a kind of cicatrice.

I have made but a very few attempts to cure tumours of the description under review. When they are situated over parts such as the sternum, which afford bases for instituting pressure of sufficient amount and permanence, this means appears to me preferable to any other. In one case, in which I recently tried this plan of treatment, the tumour had already decreased considerably, when the patient, feeling little solicitude about the ulterior progress of the affection, demanded his discharge from the hospital.

The excision and cauterization of cheloid tumours in the small number of instances in which one or other of these procedures has been instituted, have been followed by returns of the disease. They are therefore generally left to themselves: the symptoms that accompany them are nowise urgent, and the measures that have hitherto been tried for their cure have proved any thing but uniformly successful.

#### *Historical Notices and particular Cases.*

1162. The cheloid tumour was mentioned by Retz under the strange name of *fatty teller* (*dartre de graisse*).<sup>2</sup> To Alibert we are beholden for the first accurate description of the disease.<sup>3</sup>

CASE CLXXVI.—*Cheloid tumour of the right buttock developed after a burn*. Mousselet, forty-four years of age, presented himself among the out-patients at the Hôpital de la Charité, on the 18th of May, 1834. This man has from his infancy had a tumour upon the right buttock, which he attributes to the effects of a burn. The tumour is of the size of a child's hand, and is shaped very like a crab. In its centre it is formed of bands of a bluish-white colour, which terminate superiorly and inferiorly in prolongations of a very decided reddish cast;

<sup>2</sup> This disease is very extraordinary: I have only met with three cases of it. The epidermis is not affected; it is only of a deep red colour, and is raised by a collection of solid matter, which here occurs in lumps of the size of an apricot, and there in rays the length of the finger, and as thick as macaroni; or the substance appears under the form of flattened and extensive wens, much raised and as broad as one or both hands. These wen-like patches are singularly interlaced with bands of the same substance, of different thicknesses, resembling broad cicatrices, and form several folds and counterfolds as if there were sundry cicatrices placed one on the top or by the side of the other. Retz. Des mal. de la peau, et de celles de l'esprit, p. 55. Paris, 1790.

<sup>3</sup> Alibert. Précis théorique et pratique sur les maladies de la peau, 2 vols. 8vo. Paris, 1810. Art. Cancroïdes, t. i. p. 417. Atlas, pl. 28–28 bis.—Alibert. Monographie des Dermatoses, t. i. Art. Kéloïde. Vallerand de Lafosse, Revue Méd., Oct., 1829.

<sup>1</sup> Alibert, in his Monographie des dermatoses, mentions eight cases of cheloid tumour, six of which occurred among women, two in men. One of these tumours was evolved on the face; a second on the neck; the rest occupied the sternal region.



five of these prolongations are sent off from its upper part in the form of a fork; one of them ends in a small mass of a redder colour, harder consistence, and greater prominence than the rest. The prolongations were lost insensibly in the substance of the skin. The most prominent of them was marked with very distinct transverse striae.

The father of this man is affected with a tumour over the sternum, and his brother has a number of congenital marks upon his breast. He complains of no pain in the tumour, but occasionally of a kind of smarting or pricking sensation. The tumour is evolved on the cicatrice of a burn which is still very apparent in one place. The object of this man's visit to the hospital was not on account of the tumour described, but of a fall which he had had some weeks before. He was bled. He is the father of four children, none of whom are affected with cheloid tumours.

CASE CLXXVII.—*Cheloid tumour, depressed in its centre.* A woman, aged sixty-five, presented herself among the out-patients at the Hôpital de la Charité, in the course of the year 1831, having a cheloid tumour on the fore part of the chest. She says, that at the age of thirty-five years she received a puncture over the middle of the sternum with the point of a knife; that a *spot*, the size of a pea and the seat of troublesome pruritus from time to time, followed this wound. Ten years after the cessation of the menstrual discharge, this pruritus became still more urgent, and the spot began to enlarge. At the present time, twenty-eight years since the receipt of the puncture of the skin covering the sternum, upon the median line and about the level of the third rib, a transverse tumour is perceived, of a whitish colour in its centre, like the cicatrice of a burn, about a quarter of an inch in diameter perpendicularly, by about three inches in diameter transversely. From this central cylindrical production, three red rays or arms, rising about a line above the level of the surrounding integuments, and five lines in length, are sent off with remarkable symmetry, which bear no slight resemblance to the disposition and form of the claws of a river crab.

According to the patient's account, the centre of this cheloid production, now white, and somewhat wrinkled like an old cicatrice, was formerly as red as the radii detached from the tumour. The red colour disappears on pressure. The tumour is painful and itchy.

#### HYPERTROPHY OF THE CORION.

1163. Hypertrophy of the corion or dermis sometimes shows itself externally in the shape of small lenticular tubercles, the colour and consistence of which are very nearly the same as those of the skin that surrounds them. These tubercles are scarcely ever seen among children, but they are not rare among adults and individuals of mature years. They occur most commonly on the upper lip, and on the *alæ nasi*. They are occasionally congenital, and are then frequently surmounted by one or several strong and bristly hairs. They never terminate either in resolution or suppuration, and when they increase in size it is only in the slowest and most gradual manner.

1164. It often happens as one of the consequences of obesity, that the skin in the vicinity of old ulcers, and as an effect of elephantiasis *Arabica*, that the integuments covering the parts affected experience a real hypertrophy, and acquire a mammillated or tuberculated appearance (vide *Elephantiasis Arabum*).

1165. Hypertrophy of the corion and subcutaneous cellular substance may be limited to a single region of the body. This species of structural change occurs more frequently in the nose than in any other part.<sup>1</sup> The affection takes place very slowly and gradually, and most commonly without any evident cause. It generally attacks individuals of mature years. Women appear to be its subjects very rarely. It occurs under three principal forms; in one case the lobes of both *alæ nasi* are affected with hypertrophy simultaneously, accompanied with a notable development of the vascular rete of the skin,

which assumes a vinous red colour; in another instance one or more small tumours of the form and dimensions of the indurations of rosacea, appear upon the *alæ nasi*; in a third instance these two forms of hypertrophy occur combined.

Hypertrophy of the *alæ nasi* extends by degrees towards the root of the organ. The small tumours or indurations that make their appearance on their surface may continue long stationary, and never exceed a small hazelnut in size, or they may attain dimensions much more considerable. Not only do they then deform the features, but they impede the free entrance of the air into the nostrils, and even of food into the mouth. The tumour has a knotty uneven surface externally, and is of a deep red or purple colour, traversed by an infinity of fine tortuous vessels. The various nodules composing the general hypertrophy are often separated from each other by deep fissures. When the affection is of very long standing, the integument of the cheeks sometimes acquires a colour and an appearance similar to that of the enlargement of the nose. The sebaceous follicles are very much developed, and the secretion from them sensibly increased. As the disease advances the enlargement extends in length, hanging down upon the upper lip and over the mouth in one or several lobulated masses. In the aged, the hypertrophied nose occasionally ulcerates superficially in one or several points of its surface.

1166. The hypertrophy now described, although accompanied with a considerable morbid increase of the vascular rete of the skin and subcutaneous cellular membrane, differs in point of structure from the sanguineous erectile tumour. When wounded with a cutting instrument these enlargements bleed profusely, indeed, but their lamellar, hard and dense tissue, which is one of the principal elements in their composition, differs entirely from the open, spongy substance which constitutes the erectile tumour. Both in its external appearance and organization, this alteration of the skin of the nose has still less resemblance to cancer.

1167. Topical blood-letting is an efficient means of checking the progress of this affection. A woman of the name of Bertin, thirty-four years of age, became an out-patient at the Hôpital de la Charité in the month of April, 1827. The point and left side of the nose were enlarged and of a vinous red colour. The redness and swelling disappeared on pressure, and were not accompanied with either heat or pain or itchiness. The affection had commenced with a slight pain in the *alæ nasi* towards the middle of October last, having neither been preceded nor accompanied with any symptom of an inflammatory nature. The red tint of the part affected was most vivid in the morning, at the moment of waking; it declined slightly by and by. It had been temporarily increased by the application of a plaster which had been recommended to the patient, of the composition of which she knows nothing. Several applications of a number of leeches to the orifices of the nostrils subdued the swelling and the redness of the parts materially.

1168. The local abstraction of blood is unavailing when the upper part of the nose has been swollen and injected for several years. Affections of this description, indeed, as they constitute simple deformities rather than troublesome maladies, are not often made the subject of any special treatment. A man, named Mocton, fifty-three years of age, of a sanguine temperament, is the subject of this kind of vascular and incurable hypertrophy of the root of the nose. It is now, April, 1827, nearly five and twenty years since the lobes of the nose began to swell and to present a ruddy violet colour. The size of the base is nearly the double of what it ought to be, and is of a violet hue, which becomes redder under the influence of increased temperature or after indulgence in strong liquors of any kind, a circumstance, however, which does not prevent Mocton from yielding to temptation at very frequent intervals. Cold, on the contrary, renders the tint deeper. The orifices of the cutaneous follicles are extremely open. The nose is unaffected with rosacea.

1169. Patients often seek medical aid, the base of whose nose is surmounted with many cellular and vascular tumours. Civadier, Hey, Dalrymple, and several other surgeons, have removed such tumours with success. Imbert Delonnes<sup>2</sup> removed a tumour of this description, which weighed two pounds, and hung down as low as

<sup>1</sup> Civadier. Description de plusieurs tumeurs carcinomateuses situées sur le nez et aux environs, extirpées avec succès (Mém. de l'Acad. Roy. de Chirurgie, 4to., t. iii. p. 511). Dalrymple (J.). De l'ablation des tumeurs qui s'élèvent sur la peau du nez. (The Medical Quarterly Review. Gazette Médicale, 4to. Paris, 1834, p. 135.)

<sup>2</sup> Imbert Delonnes. Progrès de la chirurgie en France, 8vo. Paris, an. viii.



the breast of the patient. When such tumours are only attached to the nose by a narrow pedicle, which, however, is not commonly the case, they may be removed with a ligature.<sup>1</sup>

1170. Hypertrophy of the skin of the extremities is even more frequently met with than that of the nose. I once examined the arm of a woman, with M. Reynaud, who had had the right breast removed on account of a cancerous affection of the mammary gland. Subsequently to the operation, the lymphatic glands of the axilla had enlarged, and become scirrhus; the right arm then became œdematous, and the skin of the forearm, hard, grayish, and tuberculated on the surface; it bore a very considerable resemblance to the skin of the leg of the elephant. There was a large ulcer on the back of the hand, at the bottom of which the extensor tendons could be seen; the discharge from this sore had been copious and fetid. Towards the upper and inner part of the arm there was a kind of excrescence which projected nearly half an inch. The surface of this growth was smooth and reddish; a part, into which an incision had been made, was of a dull white; it was traversed by a number of small vessels; its general characters were in all respects those of encephaloid formations, especially of that variety which is often found in the stomach. There were two other tumours of a similar kind, of smaller size, near this principal one. A careful dissection of the skin of the forearm exposed the following particulars: a great number of lobules or nipple-like eminences arose from its surface. The smallest might be regarded as simple papillæ very slightly developed, others were of the size of a large pea, or even of the extremity of the little finger. Those of considerable magnitude were uneven on the surface; secondary mammillary eminences rose from, and gave them something of a mulberry appearance. In the spaces between them there existed a number of orifices, apparently belonging to the cutaneous follicles. An epidermic formation, of a dirty gray colour, and of very considerable thickness, covered them; the outer layers of this rather resembled a kind of scurf deposited irregularly than a proper membrane, and were rubbed off with the greatest ease. When thus removed, the adhering surface exhibited a multitude of elevations, which appeared to bury themselves by their bases, within the spaces between the mammillæ and in the follicular orifices, and represented in exaggerated intaglio and relief the different particulars of the external surface of the skin.

Under this layer there existed another of a dull white, covering the papillæ and nipple-like eminences in a more uniform manner, and adhering to them more intimately; after maceration for a few days, however, this inner layer could be detached with the same facility as the outer one, when it appeared under the guise of a second epidermic lamina, its outer surface being of a dull white; its inner aspect, on the contrary, appearing slightly sprinkled with black, apparently contained in a thin mucous-looking layer, entangling a little dark colouring matter. In some places this remained deposited on the papillæ and nipple-like projections under the form of a layer which was readily removed by scraping.

The numerous elevations which beset the surface of the skin immediately underneath it, now appeared so much the more conspicuous, as the thickened cuticular layers were removed, these having penetrated the spaces between them, and tended to conceal the extent of their relief. The papillæ then appeared under a variety of aspects, according to their size; the smallest consisting of slight simple projections, somewhat flattened, and presenting a faint tinge of black upon their summit, similar to papillæ generally, when slightly enlarged, but forming, especially when seen under water, a kind of nap or pile, extremely similar to that which is observed on the mucous membrane at the commencement of the small intestines, when it is examined under the same circumstances. There were others which did not differ from these, save in being a little less prominent; others again, of a larger size, radiated from a kind of central foot-stalk; to conclude, there were nipple-like projections of small size, and patches of flattened laminae standing side by side, like the leaves of a book, and by their general reunion, composing mammillæ of various magnitudes. The epidermic laminae, of which I have made mention first, did not penetrate between the layers of these composite mammillæ; they merely covered them generally. Divested of their common

covering, and floating in water, as I said before, these elevations bore a strong, though, of course, an exaggerated, resemblance to the foliaceous and ramified villi of the small intestines, when examined with a magnifier under water.

The skin cut through perpendicularly, presented some differences of appearance before and after maceration. Before maceration, the corion, considerably increased in thickness, formed a deep layer, to specify the exact limits of which was easy. Its surface was plain in some places, as the direction of the line, which showed its termination, indicated. In others it was sinuous, and the corion appeared to enter as a constituent part into the composition of the papillæ and mammillary eminences.

Under the corion there was a layer of considerable thickness which in some points was not very distinct, but which in others was easily distinguished by its slightly bluish cast of colour. This layer entered as an element into the organization of the elevations of the skin, and even formed its basis. It was infiltrated with a very considerable quantity of serum, and in the points corresponding to the elevations, and particularly to the larger of these, it was traversed perpendicularly by ramifications of arteries and veins, which expanded on the surface of the papillæ and mammillary eminences. Some of these eminences were of a vivid red, not only on their surface but to a certain depth also. This appearance was destroyed by maceration. When the serous infiltration had flowed out, the corion was seen penetrating into the whole of the elevations.

In this case of hypertrophy of the skin, as well as in many others which I have examined, the inner surface of the skin had nothing of the muscular appearance which Oslander<sup>2</sup> informs us he detected in the skin of the abdomen of several women who had died in child-bed. The corion, the papillary body, the albid and epidermic layers were truly hypertrophied, but the follicles of the skin did not appear to have participated in this anormal development.

#### HYPERTROPHY OF THE SUBCUTANEOUS CELLULAR, AND ADIPOSE TISSUES.

1171. I have met oftener than once with individuals affected with accidental as well as congenital tumours, frequently pyriform and pediculated, varying in their dimensions from the size of an olive to that of a large pear, and consisting of *cellular substance*<sup>3</sup> which the skin, in a perfect state of health, or furnished with a larger number of blood-vessels than usual, covered externally. A man, fifty-one years of age, who died of dropsy in the Hôpital St. Antoine, had a great number of congenital tumours of the above description on different parts of his body. Their size varied between that of a pea and that of a hen's egg. The smallest of these tumours were pediculated; the largest were globular, soft and flaccid. There were several on the face, and some on the extremities; but they were most numerous on the trunk. On incising the smallest of these tumours vertically, the cut was smooth, cellular, without any appearance of vessels; but several were seen in the tumours of a somewhat larger size; and they were so conspicuous in the largest of all that the cut surface became covered with blood; the tumours were also of a livid colour, and by compressing them, numbers of veins swelled up and became extremely conspicuous in their interior. These tumours contained no fat, and their white appearance or bluish cast in those places where they were traversed by veins, distinguished them sufficiently from fatty growths. Of a soft consistency, not creaking under the knife when cut, nor presenting those lines of a dull white, and those bluish veins so uniformly met with in scirrhus tissue, the tumours under consideration were evidently not of this nature. Over the surface of this man's body there were, further, a considerable number of congenital patches, some of a milk-coffee colour, others of the hue of wine lees.

I have since seen a case exactly similar to the above among the

<sup>2</sup> Comment. Gœtting., recent. vol. iv. 1820.

<sup>3</sup> The skin, says Beclard, is sometimes raised by quantities of tumours of different sizes formed of an accidental tissue of a white fibrous aspect, much more compact than the cellular, but softer than the ligamentous. This same formation is also frequently found in polypi, and especially in the submucous tumours of the vagina and vulva. Elem. d'Anat. génér., p. 294, 8vo. Paris, 1823.

<sup>1</sup> Ephem. Nat. Cur. dec. iii. ann. viii. et viiii. Obs. clxxxiv.



patients of my colleague, M. Rullier. Dagorn<sup>1</sup> has given the details of a very remarkable instance of the occurrence of these tumours in a girl eighteen years and a half old, upon whose body there were eight of them, the largest weighing forty-six pounds. After the removal of this mass, it was found to consist of cellular substance, the cells being very much dilated, and filled with transparent serum intermingled with minute yellowish-coloured fatty flocculi. An artery and vein were observed to divide and subdivide in the *interior of the tumour*. The skin which covered it appeared thinner than natural.

1172. P. F. Walter<sup>2</sup> has figured and published a very extraordinary case of *nævus in the form of a tumour*, which differs, among other particulars, from that detailed by Dagorn, in the skin which covered it having been beset with hair, and in having contained a large quantity of adipose substance.

1173. Hypertrophy of the subcutaneous adipose tissues gives rise occasionally to a single, soft, slightly mammillated tumour, generally of a flattened form, unaffected with pulsations and without change of colour of the skin (*loupe graisseuse*); tumours of this description, however, are not always single; they occasionally occur in considerable numbers under the skin of the upper parts of the extremities, which then appear covered with inequalities. I have met with several instances of tumours of this kind occurring without assignable cause in individuals who were by no means very stout. Tumours of this kind have been seen to form in the palm of the hand,<sup>3</sup> the skin of which then experienced a remarkable alteration, analogous to that of a variety of ichthyosis. Lorenz Ruff, fifty-three years of age, had been affected from his infancy with hard knubby protuberances on his hands and feet which had become extremely troublesome from the time he began to labour with his hands. These tumours had increased imperceptibly, and, especially within the last three years, had acquired an enormous size. This man was in other respects strong and healthy, and had never been unwell, save with small-pox and dysentery. The hands and fingers, which were remarkable for their size, were covered on their palmar aspects with large excrescences. The nails looked like talons or spurs. Similar growths occurred on the inner side of the sole of the right foot, from the heel to the great toe; there were also several on the left foot. The tumours were of a grayish-white colour, of the consistence of soft horn, conveying to the touch a sensation similar to that imparted by a mass of warts of different sizes. The larger were surmounted by smaller ones; here they formed isolated clusters; there they were connected by parts projecting in a less degree. Their surface, although dry, was sensible to the slightest touch, and bled with extreme facility; it remained acutely sensitive for several days, when a few of the cuticular squamæ with which it was covered, happened to be rubbed off. Pressure and a blow caused pain. Walking was painful, particularly upon a dry, and hard road; and the patient could not continue it for more than an hour continuously, resting at frequent intervals, in which time he got no farther than another would have accomplished in a quarter of an hour. He required a long time to dress and undress, and the pain he then experienced was extreme. In rainy and windy weather he suffered from intolerable burning and prickling sensations in the diseased parts. The motions of the fingers were greatly impeded; they could not be bent, but the motions in abduction and adduction remained.

Several coloured engravings made from oil paintings add to the accuracy of these details. To the above case Behrends has assimilated that of a girl ten years and a half old, whose fingers were covered at their extremities with horny substances of a yellowish-brown colour, as thick as the finger, and from three-quarters of an inch to an inch and a half in length. The skin upon which they grew was red and painful. This case is related by Ab. Haskel.<sup>4</sup>

<sup>1</sup> Dagorn. *Observations Chirurgicales sur une jeune fille âgée de dix-huit ans et demi, qui portait sur le tronc huit loupes*, etc. 8vo. Paris, 1822.

<sup>2</sup> Walter (Ph. Fr.). *Ueber die angeborenen Feithautgeschwülste und andere Bildungsfehler*, fol., fig. Landshut, 1814.

<sup>3</sup> Behrends (J. B.). *Beschreibung und Abbildung knolliger Auswüchse der Hände und Füsse des Lorenz Ruff*, in-fol. Frankfurt am Main, 1825. Traduit dans les *Arch. génér. de méd.*, t. xiii. p. 260.

<sup>4</sup> *New Engl. Journ. of Med. and Surg.*, vol. viii. No. 1. Boston, 1819.

## DEGENERATIONS.

1174. The degenerations of the skin include fibrous, cartilaginous, and osseous transformations, melanosis, tubercles and cancer (§ 750).

### FIBROUS DEGENERATIONS.

1175. Under the name of *special tumours of the skin*, M. Velpeau has published a very remarkable case which appears to belong to the class of fibrous degenerations of the skin and subcutaneous cellular membrane; although indeed the spontaneous disappearance of several of these tumours by a process of internal suppuration is not altogether favourable to this opinion.

CASE CLXXVIII.—*Indolent tumours formed at the expense of the skin upon different regions of the body*.<sup>5</sup> On the 14th of July, a man, thirty-five years of age and well formed, presented himself for advice, on account of about a dozen tumours of a particular description formed at the expense of the dermis, and disseminated over different parts of the body—the face, neck, breast, crista ili, the thigh, the flank, &c. It is now above thirty years since the first of these tumours made its appearance. Many others have been evolved at different times, and have been discussed by the use of various topical applications. These tumours are slightly flattened and elongated; they are generally about the size of the point of the thumb; they appear to be covered by the cuticle; their surface is rough and uneven; their colour is very similar to that of the skin at large; they may be squeezed pretty strongly without the patient complaining of pain; in a word, all their external characters proclaim them to be of a fibrous nature.

There is one, however, which differs from the rest in several particulars. This is situated on the outer aspect of the right lumbar region. It is shaped like a mushroom or fungus, very much compressed, being one inch in thickness and above four inches in breadth. Its pedicle, which is extremely short, is three inches in circumference. The skin on the inner or under surface of the tumour is natural in colour, &c.; that which covers its outer aspect is, on the contrary, of a redish gray tint, soft, fungous in appearance, and discharging a little watery fluid of a bitter-sweet and very disagreeable odour. During the last three months, and since it has been exuding this fluid, it has been readily made to bleed, and the pressure of the body when the patient lies down makes it painful; it is in fact on this account that the patient has been induced to seek for medical assistance.

The tumour in question was removed in presence of M. Roux, by M. Berard, on the 11th of July. The operation was followed by no particular consequences, except that the whole of the other tumours which existed in different parts of the body softened and disappeared entirely, whilst the wound was cicatrizing. The whole became the seat of small abscesses before disappearing; and the patient informed us that the same thing had happened with the same circumstances several times before. This fact appeared to us the more worthy of remark, from the tissue composing the one which had been removed not being of a nature that usually falls into suppuration. It evidently consists of a degeneration of the outer laminae of the skin, which are nearly of the hardness of scirrhus, but differing from this in its want of homogeneousness, in the granular aspect of its cut surface, and in several other particulars. Words would convey but an imperfect idea of its structure, and we know of no object to which it can be compared. Let us only say that it could not be assimilated to the scirrhus, the fungous, nor to those degenerations that are simply fibrous; neither did it resemble any species of cancerous degeneration; nor, in fine, was it precisely similar to any of the kinds of morbid tissue described by pathologists. It appeared as if constituted by the dermis very much expanded (*rarifié*) in two thirds of its thickness, and intimately blended with an infinity of granules of a concrete cheesy matter. In our opinion, it forms a new, perfectly distinct, and yet undescribed variety of morbid production.

With the above case I connect provisionally the following one,

<sup>5</sup> Velpeau. *Arch. gén. de méd.*, t. xii. p. 511.



which in the first edition of this work, I had associated with my account of the *molluscum* of Bateman.<sup>1</sup>

CASE CLXXIX.—*Small, solid, flattened tumours of the face, trunk, and extremities.* A locksmith, fifty years of age, of a sanguine temperament, married, the father of a healthy family, and never having had syphilis, exhibited (in the year 1824) all the appearances of *molluscum*. The disease had begun on the forehead by a small tumour rather larger than a shilling, and gradually extended till its base was more than an inch in diameter, projecting so much as to annoy the patient when he put on his hat. He had had this tumour tied; but whether the ligature had not acted to a sufficient depth, or had been inadequately applied, the tumour reappeared, and several others of the same characters were evolved on different parts of the body.

The skin, at the expense of which these tumours were formed, was soft and movable over the subjacent parts. The tumours were not painful when handled. They were hard, and generally red, but became paler and somewhat shriveled under the action of cold. The right cheek was beset by about a dozen of broad, flattened, whitish tumours, separated by narrow intervals, and projecting from the surface of the skin, in a manner similar to the wheals of urticaria. On the neck, several lenticular tumours were perceived. Several were also observed on the forepart of the chest and abdomen, particularly on the right side. The left side of the trunk, and the left arm, presented but a very small number of these tumours. The right upper extremity, on the contrary, was beset with a great number of them, of an oval or irregular shape, hard consistence, deep red colour, and very much raised above the level of the skin. The lower extremities, especially the legs, were covered with similar excrescences. Their bases here were broader, they were also more closely set, and appeared to form slightly mammillated bands. The principal functions of the body were perfectly regular. He was put upon a course of laxatives and baths for about two months, but without success.

## MELANOSIS.

1176. Melanosis may appear deposited in *grains* within the substance of the skin, or may form true tumours in its substance or upon its surface. Deposits of the same description almost always take place at the same time, in one or more of the internal organs.

1177. The skin is occasionally beset with a considerable quantity of small spherical tumours, many of which are of the size, of the colour, and have even the lustre of black currants or juniper berries. They are black throughout, and, when cut through, present a great resemblance to the parenchyma of the truffle. According to Breschet, these small tumours appear occasionally to spring from the tissue of Malpighi. When melanosis shows itself in this way on the skin, a matter, similar in all respects, is generally deposited in several other organs and tissues of the body. A. Gautier, cook, aged fifty-nine, of fair constitution, entered the Hôpital St. Louis, Aug. 27th, 1816, on account of a disease which had appeared about two months previously, after violent grief. The complaint had begun with such feelings of general lassitude that the patient could not stand; she felt at the same time benumbed over her whole body, and a few days afterwards, she was obliged to betake herself to her bed. She soon lost her appetite, got no sleep, and was then attacked with diarrhoea and vomiting. A number of small tumours now appeared in the substance of the skin on different parts of the body. On her entrance into the hospital, Gautier was in the following state: a great number of tumours, of the form, and particularly of the colour of *black currants*, were scattered over the anterior part of the thorax. The spaces between several of them in this situation were dotted with minute red points, very similar to flea-bites. Over the breasts, the little black tumours were so much crowded that they formed a broad patch. Several of the same tumours of a larger size were also seen upon the abdomen; some of them were here two inches in circumference. The arms and thighs were also the seat of several, especially on their inner aspects; the forearms and legs were unaffected. The patient was in an extreme

state of debility; her appetite was gone; she vomited the small quantity of food she swallowed; she got no sleep; her bowels were relaxed; the breathing was laborious; she was tormented with frequent cough; the pulse was extremely soft and very compressible. The symptoms went on increasing in severity for some days, and were speedily aggravated by the occurrence of general œdema, which, by giving a white look to the skin, caused the black colour of the tumours to appear even stronger than before. The patient died on the 25th of September.

*Sectio cadaveris.*—The black tumours with which the skin was covered when cut into, presented a homogeneous substance of a black colour, of different degrees of intensity, and varying consistency, being in one of considerable hardness, in another almost pulpy. This substance, which was always enveloped in a cyst of cellular substance, had all the characters of the production which has been described under the name of melanosis. Tumours of the same description were found in the subcutaneous cellular tissue almost of every part examined; they were not, however, nearly so numerous in the extremities as on the trunk, and especially within the abdominal parietes; they were also less regularly rounded and softer than in this situation. The cellular substance which surrounds the blood-vessels, nerves, and lymphatic glands, was literally loaded with them. They there formed by their agglomeration masses of the size of the fist. The nerves were still healthy, but the vessels were so intimately blended with the black depositions, that they could not be separated from them without being torn. In the substance of the thyroid gland melanotic tumours, perfectly distinct from the lobules of the gland, were detected. The lungs, the general colour of which was rosy, contained a few of these tumours of small size; towards their base, and below the bronchial glands, many more were discovered, but of much larger size; the bronchial glands themselves were not black. In the mediastinum, and under the costal pleura, melanic tumours were also found, the size of which varied from that of a filbert to that of a walnut. These tumours were accumulated in great numbers in the epiploa and mesentery; the duplicatures of these membranes were, so to speak, crammed with them. They were here smaller than common, the largest of them not exceeding a cherry-stone in size. Several were met with around the whole of the organs contained in the cavity of the abdomen, none of which appeared diseased, except the liver, which was greasy, and the gall-bladder, which contained five or six of the melanic tumours in its parietes. The heart and the brain were healthy; the bones were not more brittle than usual.<sup>2</sup>

1178. Simple or compound melanic tumours constitute a third very remarkable kind of organic alteration. M. Ollivier d'Angers and I once dissected a melanic tumour which had been evolved on the sole of the foot in an adult; it was of a brownish colour, very similar to that of the truffle, nearly two inches in length, and rose about a line above the level of the skin that surrounded it. In dissecting this tumour, we found that it was formed at the expense of the skin, which was altered, and impregnated with black matter. On the outer surface of this tumour several small white patches were discovered, three, four or five lines in diameter, which were nothing more than isolated pieces of epidermis. Viewed on its inner side, by which it was in relation with the subcutaneous cellular membrane, the skin presented a pretty uniform, bistry tint; the line of demarcation between the healthy and diseased skin is very distinct. The tumour was formed by the skin, become thicker and softer than natural, fungiform and black. No vessels, no scirrhous tissue, no cerebriform matter could be detected in this tissue, and the matter which coloured the altered skin adhered to it so intimately that it could not be squeezed out of it by pressure. The subcutaneous cellular tissue, the bones and the structures that covered them, were perfectly healthy; the skin alone was affected, and no other melanic alterations were discovered in the whole of the body.

1179. Under the name of *anthracine cancer*, M. Jurine has described a kind of tumour of a more complicated structure, and composed of the accidental tissues proper to cancer and of melanosis united.

Melanic tumours rarely inflame. Messrs. Breschet<sup>3</sup> and Ferrus

<sup>1</sup> Under the title of *molluscum*, Bateman describes globular sessile or pedunculated tubercles, containing ætheromatous matter; this is an affection of which I shall speak when I come to discuss the diseases of the follicles.

<sup>2</sup> Laennec. *Auscult. Méd.*, 2ème édit., t. ii. p. 38.

<sup>3</sup> Breschet (G.). *Considérations sur une altération organique appelé dégénère.*



have, however, met with *ulcerated* melanosis, several inches in extent, and situated in the right groin, in an old woman at the Salpêtrière. This sore discharged a kind of blackish fluid which stained paper and linen in the same manner as bistre, rather than proper pus.

1180. It is always advisable to remove melanic tumours as speedily as possible, whether they be simple or compound, provided they be few in number and are developed upon a region of the body where they are exposed to be bruised or otherwise injured by pressure, &c., which always hastens their progress and causes them to increase in size. In any other cases the operation may be indefinitely deferred. When melanosis appears on the skin under the form of an eruption, it is always the evidence of a diathesis against which no effectual remedy has yet been discovered.

#### *Historical Notices and particular Cases.*

1181. M. Alibert has published a very remarkable case of cutaneous melanic tubercles with deposition of melanic matter in the epiploa, the mesentery, &c.<sup>1</sup> M. Breschet has seen a melanic ulcer of the skin. M. Cruveilhier has published a remarkable instance of melanic tumour on the back and on the palm of the hand. Drs. Cullen and Carswell<sup>2</sup> have reprinted this case, and have given several others of the disease. Mr. Fawcington<sup>3</sup> has detailed a case of melanic diathesis in which the skin itself was affected. Before any of these cases were made public, however, Dupuytren and Laennec had both directed attention to melanosis, and given a complete exposition of its characters. It was next studied in a general manner by M. Breschet, who pointed out the particulars of its diagnosis from accidental formations; by Noack,<sup>4</sup> whose learned dissertation deserves to be particularly consulted; by MM. Leblanc and Trousseau,<sup>5</sup> who have made many researches on the horse, and who consider melanosis as an accidental or new tissue; by Albers,<sup>6</sup> who has published a curious case of abdominal tumour composed of fat, melanic matter, and blood. I have, in a preceding part of this work, (§ 756,) given several cases which show that certain melanic tumours bear a strong analogy to cancer in many particulars.

CASE CLXXX.—*Melanic tumour of the forehead; melanic grains of the skin of the abdomen, &c.; death.* M \* \* \*, forty-nine years of age, tall, and of a spare habit, very excitable, possessing distinguished talents, passionately fond of music, and whose life had been very stormy, had not menstruated for a year, when Dr. Caballenas, her ordinary medical attendant, called me into consultation in the course of the month of August, 1834. Ten years ago a small blackish tumour had been removed from the right breast of this lady. The wound had been cauterized with arsenical paste, and a course of decoction of sarsaparilla administered. In 1832, a small blackish tumour, similar to the former one, and which appeared on the right side of the forehead, was also removed with the knife; but shortly after the operation, the cicatrice became possessed by a tumour of the same description as that which had been taken away, surpassing it in size in the course of a few months. Several other blackish points at the same time made their appearance, scattered over the face and the rest of the body, and since this time additional crops have been evolved. The lady had for some time complained of pain about the region of the liver; œdema had once occurred in the lower extremities, and since the invasion of cholera, she had been affected with diarrhœa and constipation alternately. During the whole of the winter of 1833-1834, this lady gave herself up with the greatest ardour to study, sitting up late, living on stimulating diet, taking coffee largely, and even using

scence noire, mélanose, etc., 8vo. Paris, 1821.—Lécat also speaks vaguely of an ulcer which poured out a black matter. *Traité de la couleur de la peau humaine*, 8vo. (Amsterdam, 1767, p. 50.) Cruveilhier, *Anat. Pathol.*, has figured an ulcerated melanic tumour.

<sup>1</sup> Alibert. *Nosolog. naturelle*, 4to. Paris, 1817, p. 553, fig.

<sup>2</sup> Cullen (William) and Carswell. *On Melanosis* (Transact. of the Medico-Chirurgical Society of Edinburgh, 1824, vol. i. p. 264).

<sup>3</sup> Fawcington (Th.). *A case of melanosis with general observ. on the pathology of this interesting disease.* With coloured plates. Manchester, 1826.

<sup>4</sup> Noack (Car. Aug.). *Comment. veterinaria-medica de melanosis cum tab. æneis*, 4to. Parisiis.

<sup>5</sup> Archives générales de méd., t. xvii. p. 164.

<sup>6</sup> Albers. *Observ. suivie de réflexions sur le fungus mélanode.* (Journ. complém. des sc. méd., t. xxxix. p. 338.)

spirituous liquors all the while. This affected her general health, and in the spring of 1834, she was obliged to alter her whole plan of life; she also took gelatinous and alkaline baths. The pain about the liver now returned; she became affected with cough, and for several days striæ of blood were observed in the expectoration. Some days afterwards she was attacked with hæmoptysis, the quantity of blood lost being estimated at three ounces. She was bled to six ounces from the arm. The hæmoptysis did not recur, but the cough, the oppression of breathing, night sweats and diarrhœa, which had preceded it, continued. In the middle of August, the oppression of the chest was excessive and constant; a mucous rattle was heard especially in the posterior parts of the chest; the pulse was hard and frequent. Six ounces of blood taken from a vein presented a buffy coat a line in thickness. The oppression went on increasing; the pain in the liver gained in intensity, the patient became drowsy, and died on the 1st of September.

The body was examined twenty-four hours after death. The emaciation was extreme. The melanic tumour of the forehead, divided lengthwise, presented the same colour as a truffle; several small tubercles, situated within the substance of the skin, or in the subcutaneous cellular substance of the trunk and extremities, were composed of pure matter of melanosis.

In the substance of the vastus externus muscle of the thigh, there was a melanic tumour the size of a child's finger. The head was not opened. On the exterior surface of both lungs, especially of the right one, there were a considerable number of melanic tubercles. In the interior of both lungs a few small encephaloid masses were discovered as large as a hazelnut. In the right lung there was one tumour, the size of a chestnut, formed of encephaloid and melanic matter combined, several other smaller tumours in this and the opposite lung presented the same amalgamation. There was further a quantity of tubercular matter deposited in the summits of both lungs, and that of the right lung presented more than one small cavity. We also discovered several small deposits of pure or mingled cerebriform matter in the substance of the heart. *Abdomen.*—Similar alterations of structure were found in the liver, in the tissue of which there were numerous masses of pure encephalic matter, or of this mixed with melanosis; the largest of these did not exceed an olive in dimensions. A considerable number of melanic granules were scattered among the epiploa, the ovaries, and the kidneys. The supra-renal capsules exhibited a small collection of pulaceous melanic matter. The spleen, stomach, uterus, and bladder were healthy.

#### TUBERCULAR MATTER.

1182. I have never observed a deposit of tubercular matter within the substance of the skin, but the following passage of Laennec deserves to be quoted: "It is nearly twenty years ago," says he, "that in examining several vertebræ, in which tubercular matter had been deposited, I grazed the forefinger of my left hand with the teeth of the saw. I paid no attention to the circumstance at the time. But next day the scratch was surrounded with an erythematous blush, and there was slowly formed a small rounded, compressed tumour, which, by the end of a week, had acquired the dimensions of a cherry stone, appearing to be situated within the substance of the skin. At this time the skin gave way in the point where it had been touched by the saw, and exposed a small firm yellowish body, precisely similar to a tubercle of an ochrey-yellow colour. I touched the part with deliquescent hydrochlorate of antimony. This caused very little pain, and in a few minutes after the caustic had penetrated the whole of the tumour, I detached it with a slight degree of pressure. The action of the caustic had softened it to such a degree as to make it look exactly like a softened tubercle, of friable consistence. The place from which it had been turned out resembled a kind of cyst, the parietes of which were of a pearl-gray colour, translucent, and without redness. I applied the caustic again. The wound soon cicatrized, and I never felt any ill effects from this accident."

With this case I shall connect an abstract of one related by Dr.

<sup>7</sup> Laennec. *Traité de l'auscultation médiate et des maladies des poumons et du cœur*, 2d edit., t. 1, p. 649.



Crampton;<sup>1</sup> John Byrne, aged fifty-six, came into the hospital complaining of rheumatism. He was soon found to be phthisical. The skin of this man's body and limbs was covered with broad brownish or olive-coloured patches of different dimensions; the skin in the spaces between these was pale and sallow. A number of tubercles of the same hue as the spots, were seen scattered among them. Several of these tubercles were about half an inch in breadth, and an inch in length, and soft to the touch; others of the size of a split pea, resembled papulæ, and others, of a pyramidal shape, were connected with the skin by slender but strong pedicles. These last felt as hard as cartilage. On the surface of the broad soft tubercles, small, hard, and prominent nuclei could be detected both with the eye and the finger. Byrne had enjoyed good health till the year before he came into the hospital. Yet it is five years past since the alteration of the skin described, first made its appearance; to this, however, the patient had paid little attention, as he suffered no inconvenience from it. He was filthy in his person, and given to drinking spirits. He entered the hospital in February, and died in August, of phthisis.

On examining the body after death, the brown blotches had disappeared, or rather, they were lost in the general dark hue of the integuments. The tubercles of the skin had undergone no change. Those of a round or oval shape were composed of a caseous or gelatinous-looking substance, penetrated the corion, and extended amidst the subjacent cellular substance. This stuff was dissolved by the water in which pieces of the skin were put to macerate. The pyramidal tubercles again did not penetrate the corion; they were composed of a white and very consistent fibro-cartilaginous looking substance, without any appearance of blood-vessels. Some of these cartilaginous tubercles contained a glairy matter. The broader and softer tubercles bore a considerable resemblance to subcutaneous scrofulous tubercles; but they had neither the redness, nor were they affected with the slight pain which so commonly accompanies deposits of the above description. The round and oval tubercles were of the consistence of cheese.

The lungs contained tubercles in different states; the upper lobes exhibited several cavities and softened tubercles. At the bottom of the lungs the tubercles were small and hard. The heart was very small. The liver small, hard, and of a deep colour, presented the tubercula diffusa of Dr. Farre. The spleen was also tubercular. The mucous membrane of the intestinal canal was red, and exhibited several slight ulcers, having the characters of those found in the bodies of individuals who die consumptive.

This instance of complex degeneration of the skin, into which tubercular matter appears to have entered largely, is very remarkable.

### SPECIAL DISEASES OF THE SEBACEOUS FOLLICLES.

1183. The sebaceous follicles of the skin are liable to a variety of affections. They sometimes appear under the form of small pearly elevations, in consequence of having undergone a truly fibrous or cellular transformation, occasioned by inflammation of the skin (after *impetigo*, the application of *blisters*, &c.). Their secretion maybe increased in a very remarkable manner; their secretion altered in a greater or less degree, may be pent up within their cavities, and give rise to *grubs* or *worms* in the skin, and to *follicular swellings*, or *tumours*; they have also been seen to become morbidly developed over tumours regarded as cancerous,<sup>2</sup> and under various other circumstances.

#### INCREASE OF THE SEBACEOUS SECRETION OF THE SKIN—[STEARRHŒA].

1184. The skin is known to pour out an oily or unctuous matter, which Mr. Cruikshank procured in the form of plates, by wearing a

woolen waistcoat night and day next his skin for a month, during the hottest season of the year. This substance, rubbed upon paper, stained it like grease; it burned with a white flame and left a residuum of charcoal. I designate the morbid increase of this secretion by the title of *sebaceous flux*.

*Symptoms.*—Although this affection may occur in any part of the body, it is most frequently seen upon the nose, the eyebrows, and the hairy scalp, situations in which the natural secretion of the sebaceous follicles is always most abundant. It is generally confined to one of these regions, but in some rare cases it has been seen extending to almost the whole surface of the body. There are at all events two very different degrees of the affection. In the one, the finger passed over the surface of the affected skin, feels it unctuous and soft; and when the parts are covered with hair, the oleaginous matter, in concreting, forms a kind of brownish incrustation, which I have frequently observed in the eyebrows, and at the roots of the hair of the head. Even in those parts where the sebaceous matter is poured out in greatest profusion, the skin does not appear either red or sensibly altered; the orifices of the follicles are not even more apparent than usual. Patients, however, frequently complain of a kind of tingling, and sometimes of positive pain in the part affected; although I have also met with patients, especially young women, who assured me that they suffered no other inconvenience than the necessity of wiping their nose, forehead, or eyebrows very frequently when these were the parts affected, in order to prevent the accumulation of the unctuous matter, the appearance of which was extremely unpleasant. The loss of the hair of the parts affected is a very frequent accompaniment of this first degree of the morbid increase of the sebaceous secretion.

Another and rarer form of this affection [*ichthyosis sebacea*] appears with the following characters, most commonly on the face. The skin of the cheeks, nose, or eyebrows, appears covered with a kind of yellowish scurf, nearly of the colour and consistence of the cerumen of the ears. The skin looks thickened and unctuous around this deposit, which in some points is moist and oily, and in others of the consistence of yellow wax. The surface of the deposit is traversed in different directions by shallow lines which mark it out into a multitude of little compartments; when several of these are detached accidentally, or are removed with the assistance of the douche of watery vapour, softening cataplasms, &c., the skin is exposed, usually of a brighter red than it is naturally, and almost always, as it were, riddled by a multitude of small holes, which are nothing else than the orifices of the follicles dilated, and many of them still filled with sebaceous matter. Some hours afterwards, the skin thus cleansed, will be found to have become unctuous; and it is always, before long, covered with a fresh coating of scurf that acquires the same appearance as the first.

Patients, under these circumstances, almost always experience painful shootings in the parts of the skin affected, and these I have had described to me as so violent, that I should sometimes have been inclined to hold the statements as exaggerated, had I not had their accuracy confirmed by numerous observations of a similar kind. (a)

(a) Respecting the anatomical lesions in this disease, Mr. E. Wilson says:—"In an instance of this affection which fell under my observation about ten years since, I had the opportunity of examining the skin after the death of the patient from visceral disease. In this case, the scales were remarkable for their thickness; after being well washed, they were grayish in colour upon the surface, but white beneath, and evidently consisted of concreted sebaceous substance. On removing a portion of the epidermis by maceration, the ducts of the sebaceous glands and hair follicles were found distended with inspissated white secretion, and had a very beautiful and brilliant appearance, projecting like cones of pearl from the under surface of the membrane. The dermis presented a number of small deep pits, corresponding with these dilated ducts. The mouths of the distended excretory ducts opened upon the surface of the epidermis, some immediately beneath, and in the middle of the scales, and others by their borders. In the former situation, they could be seen as small

<sup>1</sup> Crampton (J.). Case of tubercular affection of the skin.—Trans. of the Association of Fellows and Licentiates, etc., in Ireland, vol. v.

<sup>2</sup> Weber (L. H.). Obs. sur l'épiderme, les follicules cutanés, l'accroissement du

volume de ces derniers organes dans les tumeurs cancéreuses et les poils chez l'homme. (Journ. complém. des sc. méd., t. xxix. p. 138.)



Morbid increase of the sebaceous secretion very rarely ends spontaneously; I have, however, met with instances of spontaneous cure among young females in whom the affection had appeared with the mildest characters possible. In every case, even when treated with the greatest care and skill, this affection is very obstinate, and always lasts for a very long time,—many months, and sometimes even several years. It is also very apt to recur upon parts which have already been its seat.

1186. *Causes*.—I am not aware whether any proper flux of sebaceous matter has ever been observed among infants. Adults, and individuals arrived at maturity of years, are the general subjects of the affection. Women are more frequently attacked with it than men. It is rather a rare disease. Several individuals who have laboured under it, have, as I know, suffered from rheumatism; others experience pains which appear to be of a rheumatic nature, in parts in the neighbourhood of the seat of the flux. I have never observed the affection occurring at the same time as rosacea, nor succeeding it. The affection is not contagious.

1187. *Diagnosis*.—The morbid secretion of the sebaceous follicles that merely keeps the skin oily without drying or concreting on its surface, cannot be confounded with any other affection. But when the sebaceous exudation forms a yellowish checkered layer over the surface of the skin, the appearance of which is intermediate between that of squamæ and of incrustations, it is very possible, without minute attention, to mistake this affection of the sebaceous follicles for ichthyosis,<sup>1</sup> with eczema fallen into the squamous state, with pityriasis and chloasma. With regard to ichthyosis, it is enough to remember that it is almost always a congenital affection, generally extending in various degrees to almost the whole surface of the body, but always occurring in extremes lightness upon the face, without redness or pain of the skin, which is not unctuous to the touch, and in which the orifices of the sebaceous follicles are never conspicuous. Eczema, in the squamous state, (§ 348,) is always preceded by a serous exudation

white points through the scale, and still more evidently when the epidermis was separated by maceration.

“From the careful examination of this case, of which a preparation is now before me, and of other cases which I have subsequently observed, I have been led to the conclusion, that the scales, in this disorder, increase in thickness in two ways, first, by additions to the free surface, by means of the secretion poured out in the linear furrows of the skin, and, consequently, between the scales; and secondly, by additions successively made to the attached surface by the effusion of inspissated secretion beneath them. In the preparation before me, the growth of the scales by both of these processes is distinctly evident.”

<sup>1</sup> The two following cases related by Bateman and Thomson as examples of ichthyosis of the face, appear to me to be instances of sebaceous concretion upon the surface of the skin. One of them is remarkable in a therapeutical point of view, and should encourage practitioners in similar cases to persevere with the decoct. of *rumex acutus* and the application of blisters over the parts affected. Bateman, after stating that the face is rarely the seat of ichthyosis, tells us that he nevertheless met with one young lady whose face was affected with this disease. A large patch covered both cheeks and met on the upper lip under the nose. A drawing is given of the appearance in pl. xviii. of Bateman's Atlas. Dr. Thomson met with a similar case which he showed to Bateman. The patient was about fifteen years of age when the affection made its appearance (1810). The first symptom was a scurfy appearance of the cheeks; this was easily removed by the use of soap and water; two years later (1812) this scurf increased in quantity and began to adhere more firmly. By and by it was so considerable that the patient consulted D. J. Gregory, of Edinburgh. By the use of stimulating applications the skin was cleansed in ten days; but the improvement was merely transitory; the affection reappeared. Chalybeates, aloes, mercury to the extent of salivation, hot sea-water baths, the forcible removal of the incrustation by shaving or scraping, the action of an ointment composed of subcarbonate of soda, spirit of turpentine, sugar and basilicon, a wash of corrosive sublimate, and various other means were tried, but fruitlessly, to cleanse the skin during a succession of three or four years. It was at this time that the patient went to London for advice. The eruption now extended over both cheeks and met under the nose; it was of a dirty olive-brown colour, and disfigured the face greatly, which was naturally handsome. The skin of the affected regions was as hard and rough as shagreen. Under Dr. Bateman's care the patient took pitch pills, external and internal remedies, without any advantage, during six months. She then came under Dr. Thomson's care, who, after trying a great number of remedies, was so happy as to see the disease yield to a decoction of the root of the *rumex acutus* taken internally. The disease returned on leaving off this medicine several times, but always yielded to it. Suspecting that the constant return of the disease was owing to a vicious action of the skin become habitual, Dr. Thomson applied a blister to the part, immediately after which the affection vanished to recur no more. (Bateman. A Pract. Synopsis, &c., 7th edit. p. 80, 8vo. Lond., 1829.)

which has raised or impregnated the cuticle, whilst sebaceous deposits are spread over the outer surface of this membrane. The *furfuræ* of pityriasis *rubra* cannot be confounded with the laminated incrustations of a sebaceous deposit. Chloasma, in point of colour, bears a stronger resemblance to the sebaceous deposit under review than any other form of cutaneous affection, especially when the sebaceous layer is extremely thin, dry and partially detached; still they are distinguished by very numerous points of dissimilarity (§ 1070).

1188. From this sebaceous concretion on the skin of adults it is necessary to distinguish the whitish unctuous and cheesy deposit occasionally observed on the bodies of new-born infants. This is known to be most abundant on the groins and axillæ, behind the ears, on the scalp, wherever, in short, the sebaceous follicles are most numerous; but the deposit in this case is natural and unaccompanied with pain. We have been recommended to leave this deposit of new-born infants undisturbed, and especially to respect the kind of cap which it forms by drying a few days after birth over the surface of the scalp. The propriety of such a caution appears to me so much the more questionable as all infants are not born with this kind of covering, and as I have never observed any ill effects follow its removal, when the infants were well protected against cold and damp. The scurf of the scalp left to itself increases in thickness, becomes matted with the hair as it grows, dries, splits, and is subsequently partially detached in scales or fragments. Whatever the thickness of the crust, it may always be got rid of by the use of tepid lotions, emollient poultices, and slight friction. The head of the child when cleansed ought to be covered for some days afterwards a little more carefully than before.

1189. *Prognosis and treatment*.—I have seen sebaceous incrustation of the nose, cheeks, and hairy scalp, accompanied with, or followed by, the loss of a large quantity of the hair of the head and eyebrows, continue in spite of the use of the vapour douche and purgative medicines, for such a length of time, that it became at length impossible to assign any probable limits to the duration of the malady. Of all the means recommended for the cure of the complaint, the vapour douche is, notwithstanding, the most efficacious. I have also made use, at least with temporary advantage, of lotions of the sulphate of alumen. I have tried saturnine lotions, but without marked benefit, as well as decoctions of nut galls and bistort-root, infusions of the *rosa gallica*, &c. It is generally advisable to prescribe purgatives at the same time that the vapour bath is employed externally.

#### *Historical Notices and particular Cases.*

1190. The morbid increase of the sebaceous secretion was described in the first edition of this work; it has since been spoken of under the name of acne sebacea. I have already had occasion to say that Bateman and Dr. A. T. Thomson have given two cases of the affection under the title of *ichthyosis of the face*.

CASE CLXXXI.—*Morbid secretion of the sebaceous follicles of the nose; thick concretion*.—A young woman, aged twenty-six, of weakly constitution, menstruating irregularly, perceived, about the beginning of the summer of 1825, that the alæ of the nose, and neighbouring parts, discharged incessantly a yellowish oily fluid, which was deposited on the surface, under the form of little worms. It was easy to see that these worms were nothing else than the sebaceous matter of the follicles, which was renewed as fast as it was taken away. The matter secreted accumulated gradually, became hardened, and formed thick unctuous laminæ, which could be removed without difficulty, and without causing any pain. Under them the orifices of the sebaceous follicles were more conspicuous, and much larger, than they are naturally. The principal functions of the body were regular. The slight affection mentioned, required two months of treatment by the vapour bath.

CASE CLXXXII.—*Morbid secretion of the sebaceous follicles, unctuous and ceruminous-looking deposit upon the skin of the face and scalp; partial baldness*.—In the month of August, 1826, I saw a woman, of the name of Gouette, thirty-two years of age, labouring under a disease of the sebaceous follicles of the face. She had suffered from various illnesses in the earlier part of her life, and about eighteen months previously to the above date, had had first one, and at differ-



ent intervals subsequently, two other paralytic attacks of the left side of the face. She is now at times slightly deranged.

The affection of the sebaceous follicles began in June, 1825, and had never been treated upon any particular plan. In August, 1826, the disease occupied the face and scalp exclusively. These parts are covered with a brownish-yellow and unctuous incrustation, very similar to the cerumen of the ears, which extends over the middle of the forehead, and from the ridge of the nose over both cheeks, the left especially. It is lamellar, and composed of small compartments two or three lines in diameter, in contact by their corresponding edges, which are slightly raised and whitish. The integument underneath the incrustation is healthy in appearance, presenting no trace of inflammation. On the left cheek the component laminae are thicker, more numerous, smaller, and separated by lines which traverse their whole thickness. Several parts of the skin, from which this incrustation has been detached, are covered with furfuraceous squamæ. On the right cheek the incrustation is less continuous, the laminae composing it are thinner, and the skin over a space about an inch in breadth, presents a slight erythematous blush. The thickness of the laminae of the incrustation varies on all these different places, from a sixth or an eighth to a quarter or half a line. The compartments appear to adhere to the skin closely everywhere except on the forehead, where they are loosened and somewhat raised at their edges. The pieces of incrustation are larger and thicker on the surface of the scalp generally than elsewhere; on the upper and posterior parts of the head, however, they are small, dry, and furfuraceous in appearance. The left lateral part of the sinciput is bald over a space as large as the palm of the hand. On no part of the affected surface is any thing like a pustule, papula, or vesicle, to be discovered. The unctuous incrustation is plainly due to an increased secretion of the sebaceous follicles. The parts affected are the seat of an habitual smarting sensation. On the 7th of September, 1826, the patient experienced, at five different times, the following sensations, which she designated by the title of attacks: in the left cheek and temple she first felt severe painful twinges; some seconds afterwards, very violent contractions occurred in the cheek, which lasted five or six minutes, and were followed by quivering or trembling in the muscles of the face. The patient did not lose her consciousness, and the intervals between each attack were nearly of ten minutes' duration. I had made up my mind to combat the symptoms of the cutaneous affection by means of the vapour-bath, when I ceased to perform the medical duties of the hospital.

CASE CLXXXIII.—*Morbid secretion of the follicles of the left eyebrow and forehead.*—I had once a girl of eighteen, of sanguine temperament and enjoying habitual good health, under my care, on account of a morbid affection of the sebaceous follicles of the left eyebrow and neighbouring part of the forehead. An unctuous, thin and uneven stratum of a yellowish-coloured substance, like the cerumen of the ears, was spread over the affected parts, which were neither red nor tumefied. This incrustation, which had formed about two months before I first saw the patient, without known cause, was undoubtedly the effect of an exudation from the sebaceous follicles of the skin. Fifteen vapour-baths caused this incrustation to be detached, and it was not reproduced.

CASE CLXXXIV.—*Morbid secretion of the sebaceous follicles; ceruminous deposits on the forehead, scalp, abdomen and extremities.* A woman, twenty-six years of age, the mother of several children, had suffered much from grief, and her catamenia had become irregular. She felt a kind of numbness in her arms, and experienced some difficulty in performing certain motions. Soon after this she was attacked with a disease in the sebaceous follicles. When the alæ nasi are compressed, the follicles of which are extremely apparent, numerous filiform and yellowish-coloured bodies are forced out, consisting of an unctuous matter, rather less consistent than the sebaceous fluid generally is. These bodies wiped away, the follicles were very speedily filled again. The forehead and scalp, the cheeks and abdomen, the breast and thighs, were entirely covered with this unctuous matter, which there formed a thick yellowish layer, of the consistence of the yellow wax or cerumen of the ears, and divided into an infinity of small triangular and quadrilateral compartments, which gave the deposit an appearance of being composed of squamæ;

but the epidermis had no share in the formation of the incrustation, which could be readily removed without pain to the patient, when the skin it concealed was found to be healthy, but shining and unctuous. The part thus denuded was speedily covered anew with unctuous matter, which smelt like rancid oil. The hands were also completely concealed by this substance, which on them was harder, browner and less shining, by which it acquired a still greater resemblance to squamæ, although the epidermis situated under it was healthy. The vapour bath, used every other day for two months, effected the partial detachment of these ceruminous plates. But a yellowish oily fluid, abundantly secreted by the follicles affected, gave occasion to the speedy reproduction of the ceruminous-looking matter. The vapour bath was again tried during three months at different times. The hands and fingers, which could not previously be moved without great suffering, became freer. The incrustation of the face, in part detached, was no longer renewed, though the skin still continued shining and unctuous in appearance,—the sebaceous matter was not now secreted in such quantity as to harden and form a stratum upon the surface. The abdomen, breast and thighs were almost entirely freed from the deposit; but it still continued to adhere to the hairy scalp. The hair was clipped short, and by and by the crust was lessened considerably in size. It was still more obstinate on the hands. Nevertheless the cure was nearly complete at the end of a year.

CASE CLXXXV.—*Chronic rheumatism. Morbid secretion of the sebaceous follicles of the scalp, trunk and extremities.* J. Thiolé, aged twenty-seven, became a patient in the Hôpital de la Charité on the 21st of March, 1827. He had always enjoyed good health till 1823, when he was attacked, whilst with his regiment in Corsica, with acute rheumatism, which continued for about eight months. In the month of August of the same year, he was attacked with a quotidian intermittent fever, which yielded to a fortnight's use of a cooling regimen. He has always felt more or less of the rheumatism since this time. His arms have lost flesh; they are stiff, and moved with difficulty, and almost useless to him. The motions of the legs are also slightly implicated, although they have not fallen away.

The consequence of the patient's inability to use his arms has been great neglect of his person; and a yellowish and unctuous scurf, from the drying of the matter secreted by the sebaceous follicles, has been formed over the skin of the parietes of the thorax and surface of the hairy scalp. On the chest, this deposit possesses the consistency, and all the other sensible properties of the ceruminous secretion of the ears; it is uniformly spread, and forms a layer from an eighth to a quarter of a line in thickness. It is thickest under the clavicles and over the sternum, and ends three or four inches below the level of the mammæ. A similar ceruminous-looking deposit occurs on the back, and forms a yellowish band, of the breadth of the palm, along the whole length of the vertebral column. The incrustation is divided into an infinity of little irregular compartments, from one to three lines in diameter, between which, parts of the skin are seen here and there uncovered. The matter, which is soft and unctuous to the touch, can be detached from the skin, which appears healthy, when it has not been irritated by rubbing. There is a deposit of the same kind above the clavicles, and on one or two points of the face. On the eyebrows it occurs in the shape of narrow and furfuraceous-looking lamellæ. It is thicker over the rami of the lower jaw, and forms a thick layer within the meatus auditorius externus. It is less marked upon the external ears. The secretion of the meibomian glands does not seem to be augmented. The eyelids are never glued together when the patient wakes. The orifices of the sebaceous follicles of the nose are extremely apparent, and look like small black points. The skin of the whole face is habitually unctuous, as if it had been anointed with oil. The morbid secretion of the sebaceous follicles is more abundant on the hairy scalp than elsewhere, especially over the left temporal and parietal regions. The crust which it there forms is split into small compartments, most of which are loose and adherent to the hair, which is extremely unctuous to the touch. The scalp, freed from this deposit, appears perfectly healthy; it is neither painful, nor affected with pruritus. Several locks of the hair are agglutinated, as it were, with this unctuous matter. Ceruminous-looking deposits of a similar kind exist on



various other parts of the body. The principal vital functions of this patient were healthy. He was immediately subjected to the action of the vapour bath, which appeared alike calculated to prove beneficial to the affection of the skin, and to the rheumatic paralysis of the upper extremities. The ceruminous-looking incrustation was speedily detached and the remedy was ordered to be continued. (a)

(a) *Sebaceous Ichthyosis*.—"A remarkable case of this disorder, disseminated in patches over the surface of the head, neck, and trunk, is recorded by Dr. Jacobovics,<sup>1</sup> under the erroneous appellation of '*tubercules bigarrés*,' a new variety of molluscum. Dr. Jacobovics' case differs from ordinary instances of this disease, in the longer duration of the malady, its disseminated character, the excoriations which resulted from its continuance, and the presence of inflamed tubercles intermingled with the patches.

"The patient, M. N., was a tailor of bilio-sanguine temperament, fifty-six years of age, the nineteenth child of healthy parents. His mother had a slight cutaneous affection on the neck; another had furfuraceous desquamations on the face; two sisters had several small tubercles on the neck and bend of the elbow; a sister's child had a similar growth. At the age of thirty, M. N. was attacked with severe pneumonia, which left him in unsound health for some years. On reaching his thirty-seventh year, the cutaneous disorder first made its appearance; it commenced on the neck in the form of small yellowish spots, beneath which one or more white points, the apertures of sebaceous ducts, loaded with secretion, were perceptible. These yellow spots gave rise to pruritus during the summer season, which subsided in the winter. Three years afterwards, on the occasion of a severe mental affliction, the disease showed a disposition to increase, and quickly spread over his neck, breast, and back. The disorder now assumed the appearance of little crusts,<sup>2</sup> having a roundish or irregular figure, and various colour; for instance, some were yellowish-white, others fawn-coloured and brownish, others again blackish and livid, and covered with slight desquamation, but there was no constitutional disturbance, nothing to induce the patient to apply for medical assistance until the year 1833, when, annoyed by the violent pruritus and unsightly appearance of the disease, he presented himself at Saint Louis. He was treated at this hospital for two months without benefit, and he returned to his business. Three months later his case was undertaken by Dr. Jacobovics, and presented the following characters:—

"His hair was remarkable for its greasiness, as were several other parts of his body, particularly the skin of the front of the neck, which the author describes as feeling viscous and unusually soft. At the roots of the hair were numerous yellowish patches and scales of sebaceous substance; these greasy scales were also met with dispersed over many parts of the skin. On the forehead, the *alæ nasi*, the cheeks, the back, and in several other situations, the apertures of the sebaceous ducts were very perceptible, and many of them were obstructed by inspissated secretion, which was dark-coloured in some, yellowish in others, and rose above the level of the surrounding skin in several. In other situations the sebaceous substance retained its softness and whiteness, and distending the excretory ducts, appeared like white points in the midst of the yellowish and discoloured laminae<sup>3</sup> by which its escape was prevented. The crusts commence

<sup>1</sup> "Du Molluscum, Recherches critiques, &c., suivies de la description détaillée, d'une nouvelle variété. Par M. M. Jacobovics. Paris, 1840."

<sup>2</sup> "With no better reason, apparently, than that of adhering to the erroneous appellation which he had assigned to this disease, Dr. Jacobovics styles the crusts, *tubercles*, or *tumours*, throughout his essay. They were unquestionably extravascular formations, and mere depositions on the surface. In accordance with this view, I have, in every instance, altered the terms *tubercle*, or *tumour*, to *crust*. Besides, it does not accord with my notions of pathology to admit the possibility of a *tubercle*, or *tumour*, being converted by progressive development into a *crust*. But to agree with Dr. Jacobovics, such a doctrine must be embraced; for, after indicating a number of progressive stages of growth completed by the crust, he remarks, in conclusion.—'Les tubercules bleuâtres et noirâtres, les *croûtes* noires et verdâtres, et les taches qui leur succèdent sont des formes secondaires.' That is to say, that the black and greenish crusts are the secondary forms of 'les tubercules brunâtres.' Those who would peruse the statements of Dr. Jacobovics, I must refer to his essay presented to the 'Académie Royale.'"

<sup>3</sup> "Dr. Jacobovics speaks of patches of a dirty yellow, or yellowish-white colour; these patches he seems to regard as discoloured epidermis, and he describes the white points as being beneath the epidermis. From the observation of cases of this kind, and particularly of the one above recorded (§ 504), I feel convinced that the

1191. Under the name of *worms* or *grubs* of the skin those small filiform bodies that can be squeezed out of the sebaceous follicles, are familiarly known. These are soft, unctuous, easily crushed between

by a whitish-yellow or brownish spot, of the diameter of a millet seed or lentil, but without prominence, and passed through a succession of stages which the reporter has accurately detailed. The yellow spot is attended with pruritus, and examined with a lens, a minute white point may be discerned in the centre of each. In a more advanced stage the yellow spot has increased in diameter, and is raised in the centre, when it presents three or four white points in place of one. By degrees the yellow spots become transformed into brownish crusts, having a maximum elevation from the surface of two lines (French), and a maximum diameter of six lines. These brownish crusts appear studded beneath the surface with white sebaceous points, which give the mottled (*bizarre*) character to the production, which awakened in the mind of Dr. Jacobovics the specific designation which he has assigned to the disease. The succeeding stages which the author has observed the sebaceous concretions to assume, are bluish crusts, punctated with white, and having a lobulated appearance, produced by the linear markings of the skin, and blackish crusts, punctated only around the edges, and intersected by deeper furrows, corresponding with the dermic lines. These latter were chiefly met with in the dorsal region; after a time, the linear furrows increase in depth, even to the splitting of the crust into a number of small polygonal masses,<sup>4</sup> which adhere firmly to the epidermis, and assume a deep black colour. The desiccated patches, rubbed by the dress, or scratched with the nails, are liable to excite suppuration of the dermis, and the pus, oozing from between the fractured masses, forms upon the surface a succession of irregular crusts, which resemble those of impetigo. Other crusts of a yellowish-green colour are also met with, resulting from the immediate desiccation of the brownish punctated patches, and these also become broken in the direction of the natural furrows of the dermis.

"Besides the sebaceous crusts above described, there were interspersed on this man's skin a number of small tumours and tubercles. Some of these were round or oval, prominent in the centre, of a bright red colour, smooth, and shining, covered by a thin and desquamating epidermis, and the seat of a troublesome pruritus. Others were of a bluish-gray colour, with raised and livid borders. These were the principal causes of a violent itching, and indulgence in scratching gave rise to excoriation and chapping of the edges, with a discharge of sero-purulent fluid. A third variety were vividly red, indolent, and of small size, varying from that of the head of a pin to that of a small lentil. But these tumours bore no proportion to the sebaceous crusts. They were, probably, the consequence of irritation caused by the sebaceous concretions, and can only be regarded as a complication of the sebaceous disease.

"As regards diagnosis, Dr. Jacobovics unfortunately allowed himself to be dazzled by a word, and that word the most unmeaning in the entire vocabulary of cutaneous disease, I mean, *molluscum*. Thus, after recapitulating the physical characters of the preceding case—e. g., hereditary tubercles, varying in size from that of a lentil to that of a pigeon's egg (there were none so large in his case), round or irregular, usually sessile, brownish colour, consistent or softish, generally solid, no constitutional disturbance, &c.—he remarks, 'Among the tuberculous diseases of the skin, none but the present genus is capable of assuming the whole of these characters, so I am bound to establish this in the genus *molluscum*.' An unfortunate preference, for *molluscum* is already synonymous with heterogeneity. In the treatment of this case the author employed purgatives and warm baths, but with only partial success."—E. Wilson, (*op. cit.*)

yellow patch is a thin layer of inspissated sebaceous substance, adhering very closely to the epidermis; this I conceived to be gradually raised by the deposit of fresh sebaceous matter beneath it, until the elevated crusts are formed, which are the distinguishing feature of this case. The white points will consequently be seen beneath the sebaceous scale. I have already alluded to this appearance, and have before me a preparation in which it is well shown."

<sup>4</sup> "The masses are identical with the sebaceous ichthyosis described at the commencement of this section."



the fingers, and vary both in length and thickness; they consist of concrete sebaceous matter pent up within the follicles; they are very commonly black or brown at the outer extremity; they commonly occur in greatest numbers upon the alæ of the nose and the parts of the cheeks in immediate connection with these; they are also frequently met with over the sternum, about the nipples, and in other situations where the follicles are known to be very abundant. These sebaceous concretions, moulded within the cavities of the follicles, may be forced out by pressing a fold of the skin, where they occur, between the points of the fore fingers; or they may often be seized with a pair of tweezers, or turned out with the point of a pin. They occasionally occur in such numbers as to constitute really a disagreeable and annoying disease of the skin. I was once consulted by a man, a tiler, who from his infancy had had the skin of his face, and of the inter-scapular and sternal regions, beset with grubs. The skin on these districts appeared to be studded with black points, and a multitude of filiform bodies, from one to two lines in length, could be extracted, when the orifices of the follicles became extremely apparent. The patient informed me that these concretions were more remarkable in winter than in summer. I merely recommended him to use the tepid bath frequently.

These sebaceous concretions are sometimes few in number, when they generally occur of large size. A woman, forty years of age, had four on the right cheek, the tops of which were as large as the head of a pin; and I have seen one under the right nipple in a young woman which was as large as a black-currant.

These sebaceous concretions of the follicles of the nose are occasionally complicated with psudracious pustules, and the inflammation of a certain number of the sebaceous follicles themselves (*acne punctata*). In this case one of the best applications is an emulsion of bitter almonds used frequently.

## FOLLICULAR ELEVATIONS. (a)

1192. Under this title I designate those whitish globular elevations, generally of the size of a pin's head, formed by the sebaceous follicles, full of an unctuous, whitish, solid matter. These follicular elevations are most commonly encountered on the *eyelids* and *face* generally. It is sometimes possible with the naked eye or a magnifier to distinguish a minute dark point on the surface of these elevations; this is the orifice of the follicle. If these small elevations be punctured with the point of a lancet, the sebaceous matter they contain may be squeezed out of them readily, and it is often very long before it accumulates again; but this is more certainly prevented by destroying the follicle by means of caustic. Follicular elevations of the kind under review are often associated with the inflammation of the follicles which I have spoken of under the name of *acne*. They also occur, however, along with other lesions; I, for instance, once attended a young woman affected with lupus of the nose, whose forehead was covered with these elevations. Among children of from seven to eight years old they are very frequently seen about the chin and over the cheeks. They occur but rarely among the aged. They occasionally disappear spontaneously.

## MOLLUSCUM.

Under the name of molluscum *contagiosum*, Bateman has described a contagious disease, the seat of which appears to be the sebaceous follicles.<sup>1</sup> This affection I have not myself had an opportunity of observing. (b)

(a) Under this may be mentioned the sebaceous horns, described in § 1117 and in note to § 1122.

(b) *Molluscum*.—M. Gibert remarks that the genus molluscum

<sup>1</sup> A distinguished physician recommended to the care of Dr. Bateman a patient afflicted with molluscum which appeared to have been communicated by contact. The face and neck of the patient, a young female, were covered with rounded prominent tubercles, of different sizes, from that of a pin's head to that of a small bean. These tubercles were hard, slightly transparent, and nearly of the colour of the skin. They were sessile. A milky fluid could be squeezed out of the largest of them,

CASE CLXXXVI.—*Follicular elevations of the face*. Q \*\*, aged twenty-five, had small-pox when seven years old, and had ever since continued subject to inflammation of the edges of the eyelids.

comprehends several species, which have no characters in common with each other except these—cutaneous excrescences that are indolent, of a firm consistence, having nearly the same colour as that of the skin, and generally incurable. Most writers have described three species of it, viz.: 1. The endemic and contagious molluscum of amboyna; 2. The sporadic and non-contagious M.; and 3. The ætheromatous M. described by Bateman. M. Gibert makes a fourth, which he calls stearin molluscum (*Med. Chir. Rev.*, 1844).

*Molluscum contagiosum*, says Dr. Paterson, writing in 1841 (*Edinb. Med. & Surg. Journ.*), is as yet to be regarded as entirely British—the latest authorities in France, Germany, and America, making no mention whatever of it in their respective countries. From Bateman's description (*Synopsis*) we learn that molluscum is characterized by the appearance of numerous tubercles, of slow growth and little sensibility, and of various sizes, from that of a vetch to that of a pigeon's egg. These contain an ætheromatous matter, and are of various forms, some being sessile, globular, or flattish, and some attached by a neck and pendulous. The growth of the tubercles is apparently unconnected with any constitutional disorder; they show no tendency to inflammation or ulceration; but continue through life, having apparently no natural termination.

A little farther on Bateman thus speaks of molluscum *contagiosum*. "The face and neck of this young woman were thickly studded with round prominent tubercles, of various sizes, from that of a large pin's head to that of a small bean, which were hard, smooth and shining on their surface, with a slight degree of transparency, and nearly of the colour of the skin. The tubercles were all sessile, upon a contracted base, without any peduncle. From the larger ones a small quantity of a milk-like fluid issued on pressure, from a minute aperture, such as might be made by a needle's point, and which only became visible on the exit of the fluid. The progress of their growth was very slow; for the first tubercle had appeared on the chin a twelvemonth ago, and only a few of them had attained a large size. Some of the latter had recently become inflamed, and were proceeding to a slow and curdly suppuration; and the cervical glands, lying under those on the neck, were also swollen, and discoloured as if proceeding to suppurate. The eruption was still increasing much, and not only disfigured her greatly, but had recently impaired her general health, and occasioned a considerable loss of flesh, by the irritation which it produced.

"She ascribed the origin of this disease to contact with the face of a child, whom she nursed, on which a large tubercle of the same sort existed; and on a subsequent visit, she informed me that two other children of the same family were disfigured by similar tubercles; and besides, that the parents believed that the first child had received the eruption from a servant, on whose face it was observed. Since my attention was drawn to this species of tubercle, I have seen it in another instance, in an infant brought to me with porrigio larvalis; and, on investigation, it was found that she had apparently received it from an older child, who was in the habit of nursing it. In this case the milky fluid issued from the tubercles, and may be presumed to be the medium of the contagion."

In a "*Notice of the Molluscum Contagiosum*" by Dr. Henderson,

through a very small orifice, similar to what might have been made with the point of a pin. These tubercles had grown very slowly; the first had appeared upon the chin, about a year ago, and only a small number had attained a large size. Several had suppurated and disappeared; the cervical glands had also enlarged, and seemed inclined to suppurate. The eruption caused great irritation, and weakened the patient, who had lost flesh. This woman had nursed a child affected with a large tubercle of the same description, and she was of opinion that she had caught this disease herself from the child. She informed me that two other children of the same family were similarly affected, and it was supposed that those who were first affected with the malady had received it from a nurse who had an eruption of the same description on her face.

I have since seen another case of this affection in a child labouring under porrigio larvalis, which was communicated to the child by the woman who had charge of him. In this case, the milky fluid that exuded from the tubercles might be regarded as the means of the contagion. The liquor arsenicalis was prescribed to the young woman in small doses, and in a short time the number and size of the tubercles diminished, several also suppurated.—(Bateman. *Pract. Synopsis*, 7th ed., p. 382.)



His forehead, cheeks and chin were beset with follicular elevations, from half a line to a line in diameter, and rising about half a line above the general level of the integuments, a size they had attained

(*Edinb. Med. & Surg. Journ.*, 1841), he describes four cases of the disease which he had an opportunity of seeing among children of poor parents residing in Edinburgh.

"Three of these cases were children of the same family, and the fourth was a child of a neighbour in the habit of associating with the others. Though the circumstances are calculated to excite a suspicion that the disease was communicated from one to another of these by contagion, I could not trace the transmission so conclusively as Bateman and Thomson have done. One of the three children had exhibited the disorder six months previously, but from what source was unknown. A second became affected a month later; and the third only a fortnight before the date of my attendance.

"The child first affected was eighteen months old when the molluscum appeared. The tubercles presented themselves first on the left upper eyelid, and successively affected the other eyelids and the face. When I saw the child, there were about a dozen tubercles on the face in various stages of development, and one only elsewhere,—on the right ankle. From the account I received from the mother of the progress and duration of the tubercles, it appeared that they differed much in these respects. Two had existed on the right upper eyelid for nearly six months; while several which had appeared on the hands had run their whole course in about a month. This diversity was doubtless dependent on the degree of exposure of the tubercles in the different situations to injury or irritation, for their disappearance, as stated originally by Bateman, is owing to inflammation, in consequence of which they suppurate slowly, presenting ultimately the characters of a prominent pustule.

"It does not appear that the tubercles are necessarily numerous. A twin brother of the child to whom I have just referred, though affected with the disease five months before I saw him, never had more than two tubercles, one on the leg, and another on the shoulder. These had not then become inflamed. At the time when I saw the other two children, each had but one tubercle, but I did not learn the subsequent history of the disease in them. The twin children were very unhealthy. When committed to my care, the child who was the most affected with the tubercles had a tumid belly, emaciated limbs, was subject to diarrhoea, and had a squalid appearance. The other was not in so bad a state at that time; yet both continued sickly; were in the following year affected with *psoriasis gyrata*; and ultimately died within a few hours of each other, with the symptoms of acute hydrocephalus. I had not an opportunity of watching the course of the molluscum until its final disappearance in these children; but I ascertained, nine months after they first came under my care, that the disease had disappeared, and that its duration had extended to twelve or thirteen months. The description and plate contained in Bateman's continuation of Willan's treatise on cutaneous diseases, correspond, in every essential particular, with what was presented in the cases to which I have been referring.

"Lately a fifth case of *molluscum contagiosum* has fallen under my notice, and has afforded me an opportunity of examining the structure of the tubercles, and the microscopic characters of the ætheromatous matter which they contain. I am enabled by Dr. Paterson, of Leith, to mention the existence, at the moment of my writing this, of three other cases which have recently occurred in his practice, so that now twenty cases of this curious disorder are on record.

"Of the following case I could obtain no history, either of the source of the disease or of its duration. The boy appears to have been an orphan, and was removed from the workhouse to the Royal Infirmary, where he fell under my care.

"Philip Walker, aged eight, admitted April 17th, 1841.

"This patient can give no exact account of the history of his case, but on admission he presents the following appearances.

"His head is covered in several places with large prominent scabs, varying in size from that of a sixpence to that of a half-crown.

"On the lower part of the abdomen, the penis and scrotum, and about six inches in extent of the inner surface of both thighs, there are seen from three to four dozen tubercles, varying in size from a

from having begun in the form of points that were nearly invisible. The greater number presented a small black point in their centre, similar to the puncta lachrymalia, from which I forced out a whitish

millet seed to a pea. They are in general of a round form, but a few of them appear flattened, as if from pressure. In the majority the point of attachment to the skin is distinctly smaller than the remoter part; still it cannot be called a peduncle. At the apex of each tubercle, a small dark-coloured point is seen, which marks the seat of an opening communicating with its interior, and exuding a milky-like fluid on pressure. On the left side posteriorly, about a finger's breadth from the spine, and at the lower part of the chest, there is a soft swelling an inch and a half in length from above downwards, and an inch and a quarter in breadth, of an elliptical form. In the centre of this swelling there is a smaller and gentler elevation, of a dull purplish colour, with vascular ramifications, in the apex of which there is a small rounded aperture, from which a thickish matter, closely resembling finely ground rice boiled, can be squeezed. There is no pain in the swelling; he says he has noticed it for many months, and that it was at one time much smaller. On the right arm, four tubercles, similar to those found on the pubis, exist, and ten are seen on the left arm. At the bend of the right knee, and upon the inner ankle of the left foot, a small superficial ulceration exists, which, in the latter situation, is partly covered with a dark-coloured scab. The feet are œdematous; the skin over them is red, and they are tender on pressure. The abdomen is very tense, and yields a tympanitic sound on percussion. He has frequent and rather severe cough, especially at night. His tongue is foul, and pulse above 100. His bowels are somewhat loose, several thin yellow stools being passed daily.

"The sound of percussion is impaired all over the right front, also from the axilla downwards laterally. Behind, percussion on the right side is less resonant than on the left, but not absolutely dull. The sound of respiration is somewhat harsh upon the right back, and upon the right front is dry and blowing, mingled with some sibilant rattles. The left side of the chest moves much more freely in inspiration than the right. The heart appears to beat in its natural situation; its sounds are heard with remarkable distinctness over the left, as contrasted with the right side. The left side of the chest, by measurement, is three quarters of an inch larger than the right. The skin is harsh and dry; pulse 108; bowels regular.

"May 6th, noon.—At six, this morning, he became affected with sudden and severe pain in the hypogastric region, and now the pain and tenderness of the belly are general, with more timidity and tension than formerly. Has had three stools since the pain came on; is now breathing quickly, with some tracheal rattle and bronchitic thrills on the right front. There are several lymphatic glands considerably enlarged in both axillæ and right side of the neck. Pulse 126, scarcely perceptible at the wrist; extremities rather cold. He died eight hours and a half from the time when the pain occurred.

"The body was examined on the 8th of May. It was much emaciated. A considerable quantity of turbid serum was found in the abdomen, with recent coagulable lymph in both iliac regions—in the basin of the pelvis, and on the upper surface of the liver. The subserous cellular membrane of the bowels, and of the parietes of the abdomen, was the seat of innumerable small whitish tubercles. The omentum was contracted on the colon, and filled with tubercular matter. The mesenteric glands were large, and most of them filled with tubercular matter. The right lung was at its apex, and in several parts near its surface, the seat of tubercular masses; the whole lung, a good deal loaded with blood, and an ounce and a half heavier than the left, which was not affected with tubercle, and not particularly engorged. In a narrow, transverse, and old ulcer of the ileum, a perforation was found. Several of the patches were dark, elevated, and firm."

Dr. Paterson, in the paper already cited, gives a case that occurred in the practice of Professor John Thomson, of Edinburgh, which I introduce here:

"March, 1821.—In a family, resident in the Canongate of Edinburgh, there are three children, two boys and a girl, affected with *molluscum contagiosum*. About six months ago, small tubercles ap-



substance, similar to curdled milk, but of rather greater consistence. The skin of the parts affected was not inflamed, or otherwise altered. The malady had appeared about four months ago. For the last five

years his hands had been covered with a great number of warts. He slept with his brother, who had no similar affection of the follicles of the skin.

appeared upon the face of the eldest boy, who, it is supposed, had caught the disease from some of his playfellows, although none of them at present are known to have had it, nor has it been known ever to have existed in the neighbourhood. From this boy the disease was communicated to his sister, and to his little brother, a child of about nine months old, whom he occasionally carried about in his arms. The contagious nature of the disease is well evinced in the child. On the back of its hands a considerable number of tubercles are seen which have been produced by applying them to the face, and scratching those situated there during their inflammatory stage. Some of the tubercles are small, others large, some in a state of active inflammation, others nearly of the same colour as the skin, and quite free from pain. A few of them are pedunculated, but the greater of these number are attached by broad bases. They are seen on different parts of the face, on the forehead, eyelids, nose, lips, red of the lips, cheeks, and under the chin. Those under the chin have produced a considerable degree of inflammation of the skin, and tumefaction of the submaxillary glands. Two or three appear to be decaying, are shrunk and corrugated, and of a reddish-brown hue. It is three months since the first appearance of the disease. The mother, though in the constant habit of nursing the youngest child, has not been infected."

Dr. Paterson continues:—"I am also enabled, through the kindness of Professor Thomson, to add another series of cases of this rare affection, which, some time after the last-mentioned ones, came under his observation.

"Professor Thomson was consulted regarding the child of a farmer, in the immediate vicinity of Edinburgh, who was affected with this disease in its characteristic form. It was traced to have been communicated to this child of the farmer's by a child of one of the farm servants; but this case could not be traced further. The farmer's child suffered severely from conjunctivitis, produced by the irritation of the tubercles on the edge of the eyelids. The disease was next communicated to the servant girl, who was in the habit of keeping the child during its illness, and appeared in its usual form on that side of the neck alone, against which the child was in the habit of laying its face when affected with the ophthalmia. The above cases appear to me extremely interesting in so far as they point out in the most unequivocal manner the contagious nature of the disease.

"The first case of this disease, which I had an opportunity of witnessing, occurred at the village of Newhaven, in the month of December, 1840. The child, a girl about eighteen months old, extremely robust and active, and belonging to one of the cleanliest and best class of fisher people, had been affected with the eruption for the last three months. It was first observed in the neighbourhood of the mouth and nose, and it now occupies the same localities, together with the lower eyelids, and a few thinly scattered over the cheeks and neck. The mother states that, when it was first seen, the tubercles had very much their present appearance. This child was nursed on one breast, and, although weaned, has the habit of still sucking it. The tubercles vary in size from that of a pin head to a horse-bean—the smaller ones having very much the white opaque appearance of pearly granulations, the larger ones being a little more coloured. The smaller ones are round, the larger ones oblong and irregular in shape, very much resembling that of a horse-bean. They are sessile, on a contracted base, not pediculated. The larger ones only emit a whitish fluid when pressed. They seem to be not the slightest source of uneasiness to the child, and do not even appear painful when pretty roughly handled.

"This child communicated the disease to the breast of the mother, and it appeared entirely confined to the sebaceous glands around the nipple of that breast, which the child continued to suck.

"The tumours on the breast are of various sizes, from that of a pea to a hazelnut, three of the larger ones being clustered together; all exude a thick whitish matter, when pressed between the fingers, and they seem to be equally insensible to the touch as those on the child. They first appeared on the breast about a month and a half after those on the face of the child.

"The largest of these tumours latterly became inflamed and extremely troublesome, from the irritation of the rubbing of the clothes against them.

"Particular inquiry was made as to any other members of the family being affected with a similar eruption; but no trace of it could be discovered, and an attempt to find out the source of contagion to the child proved equally unsuccessful; indeed, from the inquiries made, had any similar case existed in the village, it must have been discovered. This series of cases was seen by my friends, Professor Simpson, Dr. W. Thomson, Dr. Mercer, and Dr. Lund, all of whom looked upon them as very characteristic of the disease in question.

"Treatment.—Mrs. C., the mother, was anxious that something should be done for the tumours, as they afforded her considerable inconvenience from rubbing against her dress, and, at the suggestion of Professor Simpson, the tops of them were touched with caustic potass. The application afforded little uneasiness to the patient; the escharotic destroyed a portion of the tumours, and the remainder soon sloughed off by their bases, leaving a healthy granulating surface, which healed kindly, and no return of them took place.

"As the child's health was not in the slightest affected, no treatment whatever was had recourse to. The tumours as they enlarged generally suppurated, scabbed, and then fell off by their base, and as this happened to more of them than was generated, a decided diminution soon took place, and at the present time there are only a very few remaining.

"CASE II presented itself at the Leith Dispensary for consultation on the 2d of April last. The child, Ann M'Queen, two years old, strong and healthy, has been affected with the disease for the last two months. The mother ascribes it to her having been carried about by a girl who had some 'similar lumps' upon her body, while they resided at Dundee, and immediately before they came to Leith. The eruption at present occupies the left side of the neck and shoulder, and a few are scattered here and there upon the same side of the face and trunk of the body. The disease resembles very much in appearance the case last described. The small tumours have the same pearly appearance, and the larger ones, being slightly redder than the skin, and exuding a milky fluid from the orifice at their apex. The tubercles at present appear in groups, and irregularly scattered over the surface of the skin; their number may be from thirty to forty on the present patient. The mother states that the girl, who was primarily affected at Dundee, used to carry this child chiefly against that side of her neck. But neither the mother nor any other of the children in the family have any appearance whatever of the eruption. This, however, may be partly accounted for by the fact that the dress of this child being tied up round the neck, prevents, in a great measure, at least, any immediate contact between the eruption and the skin of the other children. Several of the largest of these tumours were cut off with a pair of seissors, and the skin healed well afterwards; others were destroyed with the caustic potass and nitrate of silver, but still the number of them on the body of the patient is not much diminished.

"The next case which presented itself was that of a young married man, whose wife I had attended in labour some weeks previous. It was observed during the progress of the labour, that numerous small tumours existed at the orifice of the vagina, and in the neighbourhood of the vulva, but, thinking that they might be condylomata, or warts, no further attention was paid to them. The husband, however, shortly after, showed me a number of tumours on the penis, which bore the characteristic marks of *molluscum contagiosum*. Upon inquiry regarding similar tumours on his wife, he informed me that they were of the same kind as those on his penis. They occasioned him considerable annoyance, and he applied for the purpose of getting them removed. The larger ones were cut off with the seissors, and the smaller touched with nitrate of silver, and they have all entirely disappeared.

"Since the above cases occurred, I have had an opportunity of witnessing a beautiful and well-marked case of this rare disease,



CASE CLXXXVII.—*Follicular elevations of the face.* D \* \*, aged twenty-three, of a sanguine temperament, had observed for the last five months, six small, hard whitish lumps, two lines in diameter, and

occurring in a child, under Dr. Henderson's care, in the Royal Infirmary.<sup>1</sup>

In the same volume of the Edinburgh Journal a case is reported by Dr. William Turnbull of Huddersfield.

From Mr. E. Wilson we procure the following particulars of a cure of molluscum contagiosum, and description of the appearance of the tumours. Mr. Wilson does not believe the disease to be contagious:

"An instance of this disease lately (March, 1842) presented itself to my notice, which was remarkable for the active development of the tumours. They were first perceived, about fifteen or twenty in number, dispersed upon the skin of the neck, face and shoulders of a little girl, four years of age. By the advice of the family medical attendant she was sent into the country, and in the course of a few weeks became quite well, all the tumours having disappeared, and no new ones being formed. Soon after her return to town, the mother brought her two other children—an infant and a girl six years old—to me. The mother and children were of blonde complexion; they had light hair, and a thin delicate skin; the mother was much alarmed at the development of these little tumours on her two other children as well as on herself, 'caught,' as she imagined, from the child first affected. I quieted her alarms relative to contagion, but was much struck by the fact of the almost simultaneous appearance of the disease upon four members of the same family. On the neck of the mother I found four or five of these little tumours closely resembling and of the size of currants, constricted at their base, and each presenting an umbilicated depression of impacted sebaceous substance, the aperture of the excretory follicle; and she directed my attention to three ugly scars upon the face left by similar tumours recently healed. On the neck, face, and shoulders of the eldest child I found eight or ten little tumours, presenting all their stages of growth. One upon the shoulder was so completely pedunculated, that I was tempted to place a ligature around it, and in a few days it fell off. On the infant they were less advanced, they were just rising from the integument, and each possessed in its centre the dark point of an excretory sebaceous follicle. The little tumours presented no signs of inflammation; they were of the natural hue, or somewhat lighter than the surrounding skin, from the whiteness of the secretion which they contained in their interior, and there was no areolar redness around their base.

"Since the above account was written, I have again (August, 1842) been visited by this patient, on account of the development of a small angry tumour of a similar kind upon the margin of the upper eyelid of her little girl, involving two or three of Meibomian glands. With this exception the children have remained free from any return of the tumours. Upon inquiry as to the manner in which they disappeared, the mother tells me, that they became black, and shortly after were rubbed off accidentally. One of large size, and situated behind the ear, in the child first affected, was snipped off by Mr. Tyrrell. The mother, who is out of health, has three still remaining, one of small size near to the angle of the right eye, and two upon the back of the hand. The former has supplied me with a fresh stock of matter for examination.

"Upon examining these little tumours, I found them to present all the characters of a small conglomerate gland,<sup>1</sup> consisting of several lobules held together by areolar tissue, and the lobules composed of ramified ducts and terminal sacculi. The ducts were remarkably dilated, particularly the central one, and were filled with inspissated secretion. The latter was identical in composition with the concretion sebaceous substance of the comedones (§ 511). The cells were of the same size, had the same appearance, and were intermingled in considerable number with epidermic scales. I differ in opinion with Dr. Paterson in not considering these cells as peculiar organisms, capable of nucleolar propagation when transferred to an appropriate nidus in another individual. I regard them as the normal sebaceous cell, which, as I have before remarked (§ 511), contains a granular substance, filling it more or less completely. In its early stage of

a line and a half in height, and of an irregularly circular, conical or flattened shape. A small black point, similar to what might be produced by the puncture of a needle dipped in ink, could be seen with

formation, the cell, like all epithelial cells, is an adherent envelop of a nucleolated nucleus; subsequently the cell increases in bulk by endosmosis, and assumes the oval and more or less flattened form, in proportion to the larger or smaller quantity of fluid present in the ducts. The granular contents of the cells are due to the breaking up of the nucleus, and in proportion to the bulk of the cell and the quantity of its fluid; they either fill the cell completely, or leave an unoccupied interval around their circumference. In the myriads of cells of a small fragment of the concreted substance of one of these little tumours, I perceived cells of both the above kinds; but the number of the latter, few on the first examination, had very much increased on the following day, after I had left the tumour in weak spirit for twenty-four hours.

"The difference in the appearance of the cells examined by Dr. Paterson, and by myself, appears to me to be immediately explained by reference to the physical difference in the contents of the tumours. In Dr. Paterson's case, the contents, as in Bateman's, were milky, and consequently, semi-fluid. Here, then, were the conditions favourable to the production of cells, having a considerable interval filled with fluid between the granulous nucleolar substance and the membrane of the cell—a deposition which induced Dr. Paterson to regard them as being composed of an external vesicle and an internal vesicle, the latter containing the granular substance. In my cases, on the other hand, the contained substance was concreted; there was a deficiency of fluid, and the granulous substance filled the cell; and in exceptional cases only were any perceived in which a peripheral interval was observed. But on the second day, as I have before remarked, when the mass had been steeped in weak spirit for a number of hours, the peripheral interval was evident in a considerable number.

"On examining my new stock of sebaceous matter, (August 1842,) fresh from the patient, I found it to consist of cells heaped together like a pile of eggs, and intermingled with a large quantity of epidermic scales in flakes. The mass consisted solely of these two substances, without any granular matter or oil-globules. The cells were variable in their form, some being more or less cuboid, others irregular from compression, some oblong, like the eggs of the ant, others, again, oval, but the most common form was ovoid, like that delineated in the figures of Dr. Henderson and Paterson. The cells presented equal diversity in size, varying in their long diameter from  $\frac{3}{16}$  to  $\frac{1}{8}$  of an English inch, and in their short diameter from  $\frac{1}{16}$  to  $\frac{1}{11}$ : some of the cuboid cells measured  $\frac{1}{16}$  by  $\frac{1}{16}$ ; the general size of the oval form was  $\frac{3}{16}$  long, and  $\frac{1}{8}$  broad; there were several oblong cells, measuring  $\frac{3}{16}$  by  $\frac{1}{16}$ ; and the common dimensions of the ovoid cell were  $\frac{3}{16}$  by  $\frac{1}{8}$ . This size corresponds very closely with the cells of ordinary inspissated sebaceous substance, whether it be concreted or pulpy; and also with the dimensions of the epidermic scales lying scattered among the cells. The contents of the cells were also various; some were filled with granular substance, in the midst of which, at some one point, the nucleus was perceptible; others contained a homogeneous substance, separated into polygonal masses, mostly of a cuboid shape; while others, again, were more or less filled with minute oil-globules. It is difficult to say which kind of cells were most numerous. I saw nothing like the double vesicle described by Dr. Paterson, and I think it possible that the appearance which he has delineated may have been produced either in the manner I have already suggested, or by the superposition of a single cell by several connected scales of epidermis; or again, by the accidental position of the cell upon the epidermic scales in such a manner as to constitute a thin margin around it."

Of treatment and the literature of the disease, M. Wilson thus discourses:—"In the case above detailed, I prescribed laxative medicine, and touched the tumours with nitrate of silver several times. By this treatment, I succeeded very speedily in removing them. I have mentioned that a ligature was placed around one; a more expeditious mode of getting rid of them would be to snip them off with scissors. In adults, they may always be snipped off. On the mother of these children, I opened several with a lancet, and touched their

<sup>1</sup> This observation confirms the description given by Dr. Henderson, § 531.



the naked eye, towards the centre of each of these, from which, by compression between the thumb and forefinger, a globule of sebaceous matter could be forced. The parts affected were the seat neither of pain, heat nor itchiness. Several boils had recently appeared on the abdomen, and for the last three weeks the patient had complained of slight soreness of the throat.

## FOLLICULAR TUMOURS.

1193. Besides the worms and elevations of follicular origin, now described, the retention and accumulation of the sebaceous matter within these organs, occasionally give rise to the formation of true *follicular tumours*,<sup>1</sup> which have often been described under the names of *wen*, *meliceris*, *atheroma*, *steatoma*, &c., and have been confounded with proper eneysted tumours. These follicular tumours may appear on almost any part of the body, but they have been principally observed on the scalp, on the face, and on the back. They are soft, indolent, and unattended with alteration of the skin around, or which covers them. The stuff they contain very often resembles curdled milk. It acquires a very offensive odour when the parietes of the distended follicles are accidentally inflamed. A quantity of hair is not unfrequently found mixed with the sebaceous matter.<sup>2</sup> When the tumours

interior with nitrate of silver. Their return may be prevented by the plan of stimulation of the skin, recommended for the treatment of comedones. Dr. Thomson used sulphate of copper, and Dr. Paterson potassa fusa, in their treatment.

"In the mode of cure of these tumours, I perceive another argument against their contagious nature. They disappeared in the first child, on the recovery of her health, during a short visit to the country, without local treatment. In the case of the other two children, many of the little tumours fell off, and the disease got well under the use of the compound senna powder. The three at present upon the skin of the mother are attributable to a disordered state of health. Indeed, I have no hesitation in asserting that this family is the subject of a *sebaceous constitution*, and that any recurrence of disordered health will bring with it a disposition to the formation of sebaceous tumours.

"After having determined the nature of the small tumours above described, and having assigned to them the position which they appeared entitled to occupy in a natural system of classification of diseases of the skin, I read, for the first time, with attention, the cases narrated by Bateman, under the head of Molluscum, and was struck with the identity of Bateman's cases with those I had just witnessed. Pursuing my inquiry with a view to ascertain the true meaning of the term, and that which seemed to be intended in its original application, I came to the conclusion expressed by Dr. Jacobovics,<sup>3</sup> that Bateman must have borrowed the appellation from the essay of Dr. Ludwig,<sup>4</sup> the reporter of the celebrated case which occurred to Tilesius. The author, in his preface, remarks—'Reinhardi, visu fœdum, corpus tectum est verrucis mollibus sivi molluscis.' Alibert, Bielt, Cazenave, and Schedel, on the contrary, attribute the origin of the term to some resemblance existing between the cutaneous tumours and the knots on the bark of the maple.

"The earliest case on record of this affection, and the one in fact which, according to the above supposition, gave the designation to the disease, is that of Tilesius, recorded by Ludwig. I propose to make an analysis of this case, as well as of those which have been published on the same subject to the present time, in order to ascertain the opinions entertained by their respective authors of the cases which have appeared in their names. The result of this inquiry will, I trust, be a confirmation of my opinion respecting the pathology and true position of molluscum."

<sup>1</sup> Bateman appears to have described follicular tumours under the name of *Molluscum*, vide his Pract. Synopsis, 7th ed., p. 380, in which place he quotes a case from Ludwig, of a man whose whole body was covered with ætheromatous tumours. Ludwig. *Historia Pathologica singularis cutis turpitudinis*, fol. Lips., 1793.

<sup>2</sup> Cooper and Travers' Surgical Essays, vol. ii.

<sup>3</sup> "Du Molluscum recherches critiques, &c. Paris, 1840."

<sup>4</sup> "Historia Pathologica singularis cutis turpitudinis J. G. Reinhardi viri 50 annorum, &c. By Dr. C. F. Ludwig. Lipsiæ, 1739."

of the follicle often continues visible for a very long time; but no traces of it are generally to be discovered when the tumours have attained a certain size. I have examined one of the tumours developed on the fronto-parietal region, and of the size of a partridge's egg. Towards its centre it rose about four lines above the level of the integuments. The portion of the scalp raised by the tumour had preserved its natural colour; but it was, in a great measure, bald. The inner surface of the tumour was applied immediately to the bone of the cranium, being separated from it neither by piliferous bulbs, nor by adipose vesicles. On the outer surface the tumour adhered to the skin, from which it could not be removed in various places, where it was only separated by a small number of adipose vesicles and hair bulbs. This follicular tumour formed a perfect cyst without any opening. It contained a matter, the surface of which was white and of the consistence of wax, whilst that of the centre was soft and of a brownish-yellow, like a coffee-custard or cream. The portion of the cyst which adhered to the skin was cellular, red, and vascular; that of the opposite side was smooth and white, like a serous membrane.

According to Meissner,<sup>5</sup> many of the tumours which have been described as *polypi* of the meatus auditorius externus, are owing to the excessive development or distension of a ceruminous follicle.

In the body of an aged woman, who had died of pulmonary catarrh, six small follicular tumours, of the diameter of a silver threepenny piece, were found on the scalp, and ten others of various sizes, between the shoulders and on the back. The majority of these were of a yellowish-white colour. I opened several of the smallest of them with the point of a lancet, and found that they contained ætheromatous matter.

In examining the body of another old woman, aged eighty-seven, who had died in the Hôpital St. Antoine, I found a follicular tumour on the right side of the pubes, in the direction of the inguinal canal, of the size of a hen's egg, on the centre of which there was a small black point like that of a grub of the faec. I have seen a tumour of the same description, as large as a filbert, behind the right ear, upon which a similar black point was also remarked. In this case there was the rudiment of another follicular tumour behind the opposite ear, that is to say, a follicular worm of considerable magnitude. I have frequently seen tumours of the above description become the seat of chronic inflammation, and pus accumulate within the cavity of the follicle, the orifice of which then resembled a fistula.

1194. Follicular tumours generally occur in numbers together. I have counted as many as fifteen on the scalp. They are always evolved with extreme slowness and successively; they feel firm, and do not fluctuate under the finger; they are not so hard as encephaloid formations, the parietes of which are stronger and less yielding.

It is not so common to find so large a number of follicular tumours evolved on the trunk and extremities. The eight *wens* (loupes) situated on the body of the young woman whose case has been published by M. Dagorn,<sup>6</sup> differed in point of size and of structure from follicular tumours. But it seems to me that we ought to refer to this class of accidental formations the *ætheromatous* tumours evolved on the face, trunk and extremities, of which mention is made by Ludwig,<sup>7</sup> and which Bateman quotes as a case of molluscum. According to some anatomists, these follicular tumours are evolved as a consequence of the obliteration of the orifice of the follicle. I have, however, seen many of large size in which the orifice continued very apparent.

1195. The *etiology* of follicular tumours is very obscure; they occasionally appear due to an hereditary disposition; to follow the application of repeated pressure, &c. They are more frequently observed among the aged than the youthful and full grown.

1196. *Treatment*.—When the orifice of the distended follicle remains apparent, after having introduced a probe into the cavity, the sebaceous matter may generally be pressed out without much difficulty. This is but a temporary remedy, however, for the matter soon accumulates again; to cure them permanently they must be laid open, and either cauterized or extirpated. Laid freely open, follicu-

<sup>5</sup> Dict. de Méd., en 18 vol., Art. Polype.

<sup>6</sup> Dagorn. *Observ. Chirurg. sur une jeune fille âgée de 18 ans, qui portait sur le tronc huit loupes, etc.*, 8vo. Paris, 1822.

<sup>7</sup> Ludwig. *Hist. Sing. Cutan. turpitudinis*, fol. Lips., 1793.



lar tumours are readily voided, and the inflammation that follows the operation is occasionally followed by their obliteration. They are also very readily dissected out, when they are not of very long standing and large size. This operation performed on the scalp, is apt to be followed by erysipelatous inflammation, sometimes of considerable intensity; so that many practitioners prefer to leave them alone there than to attack them with the knife, especially when they are numerous. These tumours are sometimes successfully treated by having inflammation excited in their interior, either by drawing a fine seton through them, or better by the injection of some stimulating fluid, as of diluted alcohol, &c.

Follicular tumours, especially those of the eyelids, may also be got rid of by being touched with the nitric acid,<sup>1</sup> or the butter of antimony, caustic potash, &c. The ligature is seldom applicable to this species of tumour.

Follicular tumours of the scalp differ in their indolence, and in various other characters, from encephaloid tumours, which are occasionally developed upon this part.

#### CALCULI OF THE FOLLICLES.

1197. Instead of sebaceous matter, the follicles occasionally secrete a hard and stony substance; Meckel found the whole of the sebaceous follicles of the haunch full of small calculi, in a boy; the piece of integument thus affected is preserved in his anatomical collection. In two other children, calculi of this description have been found in the skin of the forehead and of the root of the nose.<sup>2</sup>

#### SPECIAL DISEASES OF THE PILIFEROUS FOLLICLES, AND ALTERATIONS OF THE HAIR.

1198. This group<sup>3</sup> includes congenital or accidental absence of the hair (*alopecia*); *supernumerary* hairs; changes in the *colour* of the hair (*canities*, *accidental staining of the hair*); *anomalous direction* of the hair of particular parts, as of the eyelashes (*trichiasis*), the study of which falls within the domain of the surgeon; defective conformation or structure of the hair-bulbs, the nature of which is still little known; and the disease entitled *plica*, the characters of which I shall detail in the *Appendix*.

1198. The greater number of the alterations which the hairs undergo result from an affection of their bulbs or secerning organs. The hair-bulbs are implicated in many diseases of the scalp, in favus, impetigo, &c. *Plica* itself, according to Schlegel, is nothing else than a particular inflammation of these organs. Inflammation of the bulbs generally occasions the loss of the hair; when the hair begins to grow again it is commonly finer and lighter in colour than that which was lost.

The piliferous bulbs may be *atrophied* or destroyed by the com-

pression of subcutaneous tumours; they suffer still more commonly from the progress and long continuance of favus, of syphilitic ulcers, &c.

The growth of the hair has little influence on the other functions or organs of the economy, yet observations are not wanting to show that cutting the hair may be prejudicial in some acute diseases.<sup>4</sup>

Comparative pathology may, possibly, some day, throw new light on the subject of the alterations of the hair; it has hitherto been but little cultivated under this particular point of view. M. Fred. Cuvier has observed the bulbs of the feathers in various birds very much injected and inflamed; and after pulling out the feathers a very considerable development of the papillæ has been noticed. Is depilation followed by an analogous increase of the piliferous papillæ; and are they capable of inflaming in the same way as the bulbs of feathers?

1199. *Congenital deficiency* of the hair is a malformation very rarely met with. It very seldom continues longer than the few first years of life, and ought rather to be regarded in the light of a late development of this appendage of the skin.

1200. *Supernumerary tufts* of hair, i. e., patches of hair in situations where none is generally met with,<sup>5</sup> have been seen in different parts of the body: A young man had a congenital blackish patch on the upper and inner part of the thigh, which was not prominent, from two to three inches in diameter, and the edges of which were irregular and scolloped. This spot was covered with hair, and each particular hair presented a little enlargement at the place where it issued from the skin. I once saw a young man, sixteen years of age, who exhibited himself to the public under the name of a new species of savage or wild man whose breast and back were covered with light brown hair of considerable length, the surface upon which it grew being of a brownish hue, different from the colour of the surrounding integument. Almost the whole of the right arm was covered in the same manner. On the lower extremities several small tufts of hair were observed, implanted upon brown spots from seven to eight lines in diameter, symmetrically disposed upon both legs. The hair was brown, of the same colour as that of the head.

Ph. Fred. Von Walter<sup>6</sup> has published a very remarkable case of *nævus pilaris lipomatodes*.

Bichat informs us<sup>7</sup> that he saw at Paris, an unfortunate man, who, from the period of his birth, had had his face covered with hairs like those of a wild boar; and he adds, that the stories which are current among the vulgar, of individuals with a boar's head, with a wolf's head, &c., undoubtedly referred to cases in which the face was covered in a greater or less degree with hair. M. Vilermé saw a child of from six to eight years old, at Poitiers, in 1808, whose body, except the feet and hands, was covered with a great number of brown, prominent spots, of different dimensions, beset with hair, shorter and not so strong as that of the boar, but bearing a certain resemblance to the bristles of that animal. These spots occupied, perhaps, about a fifth of the surface of this child's skin.

Grivet, aged twenty-six, became a patient in the hôpital de la Pitié, Nov. 16th, 1826, on account of a bronchial affection. On both of this man's shoulders there was a quantity of black hair from six lines to an inch in length, fine and slightly frizzled, and different from the hair of other parts of the body, by appearing to be set within slight brown elevations of the skin which surrounded the root of each hair individually. I once met with a man of mature age, on the fore and outer part of whose thigh, over an extent of about six inches one way by about four the other, there was a thick crop of hair. The opposite thigh was but thinly beset in the same situation. This hair had appeared at the age of puberty, along with that which then began to sprout on other particular regions of the body.

M. L. Dufour<sup>8</sup> has detailed the case of a young man, twenty years of age, whose sacral region was beset not with simple short hairs, but with a tuft as long, black, thick and pliant as that of the head.

<sup>4</sup> Lanoix. Observations sur le danger de couper les cheveux dans quelques maladies aiguës (Mémoires de la société médicale d'émulation, 8vo. Paris, t. i. p. 1).

<sup>5</sup> Birgen (Carol Augustus). Diss. de pilorum præternaturalium generatione et pilosis (tumouribus, 4to. Francofurti ad Viadrum, 1745.—Bose. Programma de præternaturali pilorum proveniunt, 4to. Lipsiæ, 1776.

<sup>6</sup> Walter (Ph. Fr. von). Ueber die angeborenen Fetthautgeschwülste, etc., fig. fol. Landshut.

<sup>7</sup> Bichat. Anat. générale, 8vo. Paris, 1812, t. iv. p. 827.

<sup>8</sup> Arch. gén. de méd., t. xxvi. p. 274. Rev. Méd., 2e série, t. ii. p. 329.

<sup>1</sup> Tenon. Application de l'acide nitrique au traitement de certaines tumeurs enkystées (Mémoires et observations sur l'anatomie, la pathologie, etc., 8vo. Paris, 1806, p. 220).

<sup>2</sup> Voigtel. Handbuch der pathologischen Anatomie, 8vo. Halle, 1804, Erster Band, p. 85.—Horst. Manuductio ad Medic., p. i. cap. 2, sect. 2.

<sup>3</sup> Hippocrates speaks of the loss of the hair as an unfavourable symptom in phthisis; he also mentions baldness and whiteness of the hair. Celsus describes alopecia. Galen goes at great length into the varieties of colour of the hair. Aretæus only notices the loss of the hair in elephantiasis. Ætius and Paulus give a great number of recipes against grayness, baldness, &c. Avicenna begins his chapter: *De decoloratione* (jen. 7), with a lengthy account of the alterations of the hair, and the remedies they require. Mercurialis has entered still more fully upon this subject. The accounts of Lorry are even more complete and more accurate. But for the best details in regard to all the affections of the hair, the particular treatises published by the following authors, ought especially to be consulted:—Plempius (*De affectibus capillorum et unguium*, Lovani, 1662), Solwick (*Diss. de morbis pilorum*, Frib. 1777), Meibomius (*De pilis eorumque morbis*, Helmstaedt, 1740), J. P. Pfaff (*De varietatibus pilorum naturalibus et præternaturalibus*, Halæ, 1799), G. Wedemeyer (*Historia Pathologica pilorum*, Götting, 4to., 1812), Bueck (*Diss. de pilis eorumque morbis*, Halle, 1819), Villermé (*Art. poil*, Dict. des Scienc. Médicales); and especially the researches of Dr. B. Eble (*Die Lehre von den Haaren*, etc., 8vo. 2 vols. Wien., 1831, fig.).



And what is particularly remarkable in this case is, that the skin from which it grew was as white and fine in its texture as the integument of the rest of the body. M. Campaignac showed me a similar case in which there was a large tuft of long black hair growing from the shoulder.

1201. Certain pathological conditions may give rise to the accidental growth of hair. Boyer used to quote a case in his lectures of a man who, having had an inflamed tumour in the thigh, perceived this part become covered, in no long space of time, with numerous long hairs. I have seen a case of the same kind myself: A blister having been applied to a child two years old, was kept open for three months. Some time afterwards, the mother of the child called my attention to the circumstance that the whole of the part which had been raised by the blister was now covered with hair, which has remained ever since.

A student of medicine lately showed me a number of hairy patches which he had on his skin, and gave me the following account of the circumstances under which they were developed: "During the summer of 1829, I bathed frequently in the sea. I used to get out of the water, and dry myself in the hot sun of the South; I then returned to the water. One day in particular, I continued in the sea longer than usual. Some days afterwards, changing my linen, I happened to look down upon my breast, and saw with amazement a broad sallow or coppery patch on the upper and outer part of the right side. Looking farther, I found another patch exactly like the first, over the iliac fossa of the same side. Both of these spots remain now exactly what they were in 1829; they have neither changed in colour nor extent." These patches are not uniform: they seem to consist of a great number of small patches, separated by intervals of different extent, where the skin has continued healthy. The colour of both patches forms a strong contrast to that of the rest of the skin, and may be compared to the tint of some white wood, which has been handled and soiled, rather than to that of copper. The colour is deepest in the centre of the patches. They are not affected with any kind of tingling or other unpleasant sensation. But they are the frequent seat of the pustules of acne. It is long since the hair that covers them made its appearance. Nothing had ever been tried to disperse these patches. They seemed owing to the prolonged action of the sun's rays. Were the whole of the small spots of which the broader patches are made up to be uniformly blended together, the tint of the surface would differ little from that which the forehead of the neck of labourers, who are constantly exposed to the heat of the sun, presents.

The following case, which I have from M. Bricheteau, is a more remarkable instance still, of the occurrence of these accidental hairy spots. A young woman, nearly twenty-four years of age, having a white skin, and hair of a deep black, of weakly constitution, and reduced by a pregnancy during which she had suffered much, a miscarriage and an extraordinary difficulty of swallowing, to the last stage of marasmus, began to recover in the summer of 1826, after six or seven weeks endurance of an illness which every one thought must inevitably carry her to the grave. Scarcely had she begun to take a little food, and to recover her strength, than the skin, which was dry, earthy, and, as it were, wrapped round the bones, became covered, especially on the back, breast and abdomen, with a multitude of small elevations, analogous to those which appear under the influence of exposure to cold. These little risings became brownish at the end of a few days, and a hair was soon afterwards observed on the summit of each. This, at first, was very short, fair, and silky; but it grew rapidly, so that before the lapse of a month, almost the whole surface of the body, with the exception of the hands and face, became completely *velvety*. The hair thus evolved was afterwards thrown out spontaneously, and was not reproduced.

1202. I have several times observed a well-marked, excessive development of the hair upon the *chin* and *upper lip* in young women whose menstrual functions were disordered.<sup>1</sup> Hippocrates speaks of the same thing: "In abderis, Phætusa Phytææ uxor, priore quidem tempore fecunda erat; cum autem maritus ipsius in exilium abiisset, menses multo tempore suppressi sunt; postea rubores et dolores ad

articulos oborti sunt. Hæc autem ubi contigissent et corpus virile factum est, et hirsuta penitus evasit, et barbam produxit et vox, aspera facta est: . . . idem hoc contigit etiam Nammysie Gorippi uxori, in Thaso" (Epid. lib. vi. sect. vii).

I may also remark that this growth of the beard is very common among females of a certain age, and that it is not unfrequent among those who are mothers of several children.

In the beard and on the scalp, *compound* hairs, of a larger size than those around them are occasionally observed.<sup>2</sup> These compound hairs are often cleft at their free ends, and are sometimes formed of hairs of different colours, which separate when seized between the blades of the forceps, to be pulled out. They are produced by follicles set closely together, and communicating with the exterior by a single opening.

1203. The hair on different parts of the body may accidentally grow to a *considerable length*. This unusual development of the hair is occasionally confined to a single region of the body. I once saw a Piedmontese, aged twenty-eight, strongly built, having the chest broad and large, and the muscles of an athlete,—the arm was above twenty-one inches, and the calf of the leg nearly two feet in circumference. This man had little beard, and the trunk was very scantily furnished with hair, but his scalp was covered with the most extraordinary crop: frizzled on purpose, it was above four feet ten inches in circumference. The hair was of a dark brown, approaching to black, extremely fine and silky. This phenomenon—excessive lengthening of the hair—has been particularly observed in plica. In phthisis the hair and eyelashes are often extremely long and very strong.

1204. The growth or development of the hair may be accelerated by the state of the organs of generation. Moreau de la Sarthe showed a child to the Medical Faculty of Paris, in whom the precocious development of the testicles had influenced that of the hair to such a degree that at the age of six years the chest of this boy was as thickly beset with hair as it is usually in adults. It is well known, on the other hand, that eunuchs often lose the greater part of their beard.

1205. The hair sometimes grows in a *wrong direction*, to remedy which, it is not always enough to pull them out; it is often necessary farther to take away or destroy their generating bulbs. This is particularly the case in Trichiasis, for which Vacca<sup>3</sup> has proposed a new and very advantageous mode of operating.

Other instances of faulty direction of the hair are related by authors. Thus the hair has been seen growing in a direction the very reverse of that which it usually follows, sometimes towards the inner or adhering side of the skin. All these vicious directions of the hair are occasioned by deviations of the bulbs, or of the parts in which they are implanted. It is not uncommon, either, on the extremities to observe the hair rolled up spirally under the epidermis. The slight degree of irritation to which this gives rise, is followed by the formation of a little elevation, from which a silky hair may be drawn out twisted round upon itself.

1206. The hair presents several peculiarities in point of strength, dryness, moisture, &c. M. Alibert speaks of a woman whose hair was very crisp before marriage, but after pregnancy became so constantly moist, that it was quite impossible to make it curl. The hair of the axillæ became unctuous in the same manner.

#### FELTING OF THE HAIR.

Vocab. *False Plica*.

1207. Felting of the hair consists of an inextricable interlacing of this production. It is chiefly seen among individuals who, for many weeks or months, have paid no attention to their hair. It often occurs among females after long illnesses, &c. It is very common in Poland, where it has been observed by Messrs. Davidson, Kreuzer, Boyer, Rousille-Chamseru, Gasc, and others. Several writers have confounded it with plica.

<sup>1</sup> Burlin (Jac.). De fœminis ex mensium suppressione barbatis, 4to. Altdorf, 1664.

<sup>2</sup> Ollivier. Art. Poil (Dictionnaire de Médecine, en 18 vol.).

<sup>3</sup> Arch. gén. de méd., t. ix.



1208. Felting of the hair occurs independently of any alteration of the hair itself or of its bulbs. It may take place among individuals labouring under chronic affections of the hairy scalp, especially when the hair has been allowed to grow to a great length. The felted mass may present very different appearances. The process is similar to what takes place in plica; but the circumstances under which it happens are different, and the simple phenomenon of felting of the mere appendage, must not be confounded with a serious affection of the generating bulbs of the hair themselves.

1209. When the felted mass of hair cannot be unraveled, it should be cut off.

#### CHANGES OF COLOUR OF THE HAIR.

1210. The hair is liable to undergo certain *changes of colour* connected with some modification of that part of the bulb which secretes its colouring matter. M. Alibert gives us the case of a young lady who, after a severe fever which followed a very difficult labour, lost a fine head of hair, amidst a discharge of viscid fluid, which inundated the head in every part. He tells us, further, that the hair grew again of a deep black colour, after the recovery of the patient. The same writer details the case of Jerome B \* \* \*, born with brown hair, who, having lost it all in the course of an illness, had it replaced with a crop of the brightest red. White and gray hair have also been known to be replaced, under particular circumstances, by hair of the colour which the individual had had in youth. We are even assured that the white hair of a woman, sixty years of age, changed to black a few days before her death. The bulbs in this case were found of great size, and appeared gorged with a substance from which the hair derived its colour. The white hairs that remained, on the contrary, grew from shriveled bulbs, much smaller than those that produced the black. 'This patient died of phthisis.'<sup>1</sup> A very singular case has been published lately of a woman whose hair, naturally fair, assumed a tawny red colour, as often as she was affected with fever, and returned to its natural hue as soon as the febrile symptoms abated.<sup>2</sup> To conclude this subject, M. Villermé alludes to the case of a young lady, sixteen years of age, who had never suffered except from trifling headaches, and who, in the winter of 1817-18, perceived that the hair began to fall off from several parts of her head, so that before six months were over, she became entirely bald. In the beginning of January 1819, her head became covered with a kind of black wool over those places that were first denuded, and light-brown hair began to spring from the rest of the scalp. Some of this fell out again when it had grown to the length of from three to four inches; the rest changed colour at different distances from its ends, and grew of a chestnut colour from the roots. The hair, half white, half chestnut, had a very singular appearance.<sup>3</sup> The hair, as I have said, has occasionally been known to return in age to the colour it exhibited in youth.<sup>4</sup>

I shall only further add, with regard to the changes of colour undergone by the hair, that it may be dyed green,<sup>5</sup> blue, red, &c., by a variety of colouring matters with which it may be impregnated. The hair does not so long retain any accidental tint as the epidermis.

#### CANITIES. [BLANCHING OF THE HAIR.]

1211. *Canities* is the word used to signify the congenital and the senile or accidental loss of colour undergone by the hair. This blanching may be general or partial.

1212. The hair begins to be blanched at its free extremities; yet the hair is often seen white in that portion of its length which is nearest the skin, and black or brown in the rest of its extent. This disposition, the opposite of the former, is owing to the hair having

first been secreted black, and then, in consequence of some affection of its bulbs, secreted white.

1213. Among the aged, the hair of the head is that which first becomes white. Men usually begin to get gray between the thirtieth and fortieth year of their age. The beard, the hair of the pubes, axillæ, &c., generally become white later in life. The change almost always begins over the temporal regions. The white hairs are at first few in number, but they soon multiply, and end by spreading over the whole head. When these whitened hairs fall out, they are rarely followed by any reproduction from the bulb, so that grayness is often followed by baldness. Fair hair does not often become white, yet it frequently falls off at a very early age.

1214. *New-born infants*<sup>6</sup> sometimes present tufts of hair upon their heads completely white. Schenckius speaks of a young man, whose beard grew white from its first appearance. Young men of from eighteen to twenty occasionally become gray. Paroxysms of rage, unexpected and unpleasant news, diseases of the scalp, such as favus, wounds of the head, habitual headache, over-indulgence of the sexual appetite, mercurial courses too frequently repeated, great anxiety, &c., have been known to blanch the hair prematurely.

1215. Grayness is sometimes only partial. An adult, whose hair generally was brown, had a tuft of white hair over the right temple. Several other cases of the same kind have been recorded in periodical publications. Lorry tells us, that grayness of one side only is sometimes occasioned by severe toothache.<sup>7</sup> Ludwig has known the eyelashes become white after small-pox.<sup>8</sup> The beard has also been observed to be extremely white in one place and black in another;<sup>9</sup> it has also been known to become white on one side of the face whilst it continued of its former colour on the other.<sup>10</sup> Cases of canities of the whole of one side of the body have also been detailed. (*Dict. des Sciences Méd.*, t. iv. p. 76.)

1216. The blanching of the hair generally takes place slowly; but there are very authentic instances on record of the occurrence of canities almost suddenly.<sup>11</sup> A person of my acquaintance, says Bichat, became almost entirely gray in consequence of some distressing news that reached him.<sup>12</sup> A similar case has lately been recorded by M. Cassan.<sup>13</sup> A woman of the name of Pérat, summoned before the Chamber of Peers to give evidence in the trial of the assassin Louvel, was so much affected that her hair became completely white in a single night. In these instances certain changes depending on the state of the vital processes generally, must take place in the hair.

When hair grows from cicatrices that are without pigment, it is generally colourless. The coincidence of the want of colour in the skin and in the hair, has been observed in the majority of instances of general or partial leucopathia. In senile canities the skin of the cranium does not participate in the absence of colour observed in the hair.

1217. Gray hairs have been said to be without *marrow* or matter in the interior, in place of which there is an empty canal. Vithof assures us that the bulbs of those hairs which have become white, are of diminished size.

1218. *Treatment*.—The blanching of the hair which accompanies general and congenital, partial and accidental leucopathia, and the canities which occurs with the progress of years, cannot be made the subject of any kind of remedial treatment. It were in vain to pull out the white hairs by their roots, or to bring about their fall by the use of depilatory powders and pomatums; the hairs that spring in their places would be no less white. Hair-dressers frequently make use of a solution of the nitrate of silver to dye the hair when it has become white or gray; it has the inconvenience of rendering the hair crisp and brittle. (a)

(a) More illustrious examples might be cited in the cases of Sir Thomas More, Marie Antoinette, Queen of France, Mary, Queen of

<sup>1</sup> Bruley. Sur un changement subit de cheveux qui de blancs sont devenus noir. (*Journ. génér. de méd.*, t. iv. p. 290.)

<sup>2</sup> Journ. complém. des sc. médic., t. v. p. 59.

<sup>3</sup> Dictionn. des sc. médic., t. xliii. p. 302.

<sup>4</sup> Dict de méd., t. iv. p. 176.

<sup>5</sup> Laugier. Cuivre retiré des cheveux d'un ouvrier fondeur. *Rev. méd.*, t. x. p. 183.

<sup>6</sup> Schenck. Obs. Méd. rar., lib. i. obs. 3.

<sup>7</sup> Lorry. Tract. de morbis cutaneis, p. 402.

<sup>8</sup> Ludwig. Prim. Linæ Anat. Patholog., p. 29.

<sup>9</sup> Hagedorn. Hist. Med. Physic., cent. 3, hist. 55, p. 354.

<sup>10</sup> Brandis. Versuch über Metastasen, p. 172, note.

<sup>11</sup> Voigtel. Handbuch der Pathol. Anatomie. Erster Band., p. 90.

<sup>12</sup> Bichat. Anat. génér., t. iv. p. 815.

<sup>13</sup> Archives génér. de méd. Janvier, 1827.



1219. When canities is partial, and consequent upon a chronic inflammation of the scalp which has extended to the piliferous bulbs, the hair, although thrown out, or eradicated, is often produced with its pristine form and colour. It sometimes happens that a hair is partially secreted white, and partially coloured. When eradicated, these hairs are followed by others that are generally entirely coloured. Veterinary surgeons have made similar observations upon animals. Horses exhibit white hairs upon the cicatrices of any wounds they may have chanced to receive; these hairs are frequently replaced by others of the colour, or very nearly of the colour of the animal; more frequently still, however, a second crop of white hair succeeds that which is lost; and sometimes the parts once denuded are never covered again. It is almost superfluous to say that those parts whose bulbs have been destroyed by wounds, ulcers, &c., are never covered with hair at all.

#### Historical Notices.

1220. The ancients<sup>1</sup> ascribed natural canities (πολιότης and πολιώς of the Greeks; *canities*, *canitia* of the Latins), to a deficiency of sap in the hair, comparing it to the change which the leaves of trees undergo on the approach of winter.

Celsus does not mention accidental canities. I have quoted several cases of premature blanching of the hair, in consequence of depressing moral emotions of different kinds, and have alluded to some extraordinary instances of sudden grayness occasioned by great mental anguish (§ 1216). Several other cases are mentioned by different authors.<sup>2</sup>

#### ALOPECIA. BALDNESS.

Vocab. *Area*, *Calvities*, *Ophiasis*, *Porrigio decalvans*.

1221. Under this title are designated the senile, accidental or premature, partial or total loss of the hair, and farther, the non-development of this appendage on those parts which are generally provided with it. These phenomena are, therefore, distinct from the loss of the silky and colourless down observed on the body of the fœtus, which is detached as well previously to birth as after that event; it is also different from the moulting, or periodical fall of the hair and feathers among the lower animals.

The scalp and chin, especially the former, are the usual seats of alopecia in man; the genital organs, axillæ, eyebrows, and edges of the eyelids in both sexes, may be affected with general or partial baldness. (a)

1222. *Congenital absence*<sup>3</sup> and *ulterior defective development* of the hair are phenomena of considerable rarity, which I have nevertheless had opportunities of observing. Such was the case of the man Beauvais, who was a patient in the hôpital de la Charité, in 1827. The skin of this man's cranium appeared completely naked; although on examining it narrowly, it was found to be beset with a quantity of very fine white and silky hair, similar to the down that covers the scalp of infants; here and there upon the temples there were a few black specks occasioned by the stumps of several hairs which the patient had shaved off. The eyebrows were merely indicated by a few fine and very short hairs; the free edges of the eyelids were without cilia, but the bulb of each of these was indicated by a small whitish point. The beard was so thin and weak that Beauvais only clipped it off every three weeks. A few straggling hairs only were observed on the breast and pubic region, as in young people on the

approach of puberty. There was scarcely any under the axillæ. It was rather more abundant on the inner parts of the legs. The voice had the pitch and intonation of that of a full-grown and well-constituted man. Beauvais is also rather of an amorous disposition,—he has had syphilis twice. He tells us that his mother and both his sisters have fine heads of hair, whilst his father presented the same defect in the commodity of hair which he does himself.

The loss of the hair in consequence of the advance of years (*calvities*), happens slowly and progressively, without appreciable alteration in the scalp. Among men who are bald, the hair of the whole upper and anterior part of the head is generally lost, so that nothing more remains than a semicircle of hair extending backwards from the one temporal region to the other. Among women the hair becomes white; but bald women are much more rarely met with than bald men. Bichat has observed that before the hair drops out in the aged, the bulbs become gradually shallower, and that the slender canal which receives the roots, ends by disappearing. The follicles are also destroyed in certain partial baldnesses occasioned by the development of subcutaneous tumours. On the other hand, Bichat, in the body of a man almost completely bald, who had died of a fever which is designated as *putrid*, met with the slender conduits in their normal state, and even containing small sprouting hairs at their bottom. There is, therefore, a difference between the fall of the hair in the aged, and that which is occasioned by certain diseases. The whole secreting organ perishes in the first, the stem of the hair alone is detached in the second.

1223. *Partial alopecia* may be the consequences of various alterations of the secreting follicles of the hairs.

1st. Some of these cases occur in convalescence from acute diseases, and appear to have been preceded by slight erythema, or pityriasis of the scalp. This loss of the hair is often accompanied with a pretty copious furfureous desquamation. The comb then detaches a large quantity of epidermic furfuræ, which are renewed with great promptitude; the skin under them is generally found to be erythematous. In this variety of alopecia the hair falls off by degrees from the whole surface of the scalp. The hair looks thin, dry and brittle.

2d. In other instances the hair falls off in consequence of various morbid affections of the skin, as of sycosis, impetigo,<sup>4</sup> favus, syphilitic eruptions, morbid secretions of the sebaceous follicles, &c.

3dly. Alopecia is also occasionally the consequence of inflammation of the piliferous bulbs, induced by the previous occurrence of favus, impetigo, chronic eczema, &c. I once saw a young woman labouring under impetigo sparsa of the whole surface of her body, who lost her nails, her epidermis and her hair simultaneously. (a)

(a) The remote causes of alopecia, acting by constitutional disturbances, or modification of nutrition, are well exhibited in the following

<sup>4</sup> Impetigo; loss of the eyelashes and hair of the head. P \* \*, twenty years of age, entered La Charité, April 3d, 1827, labouring under impetigo of the upper lip and nose. For seven months he has had a constant discharge from the nose; during the last two, incrustations have been formed on the alæ nasi, septum and upper lip. These are now from two to three lines in thickness and almost obstruct all access to the nostrils. Several pustules evolved nearly an inch from the alæ nasi, and on the surface of the chin, have all the characters of those of impetigo. The right eye is inflamed; the eyelids also inflamed have lost their cilia here and there. (V.S. ad §xii; veal broth with two drachms of sulph. sodæ.) The incrustations were got rid of by means of emollient cataplasms, and the course which is proper in these cases was prescribed (vide Impetigo) with such success, that the patient left the hospital well on the last day of April. He had a relapse, however, and returned on the 16th of May, the disease having now attacked the scalp, and the hair of the districts implicated being much thinner than elsewhere. Sulphureous washes and baths, infusion of wild endive with a course of sulphate of soda, dissipated the disease a second time before the 1st of June, when a fresh crop of hair was beginning to appear on the regions that had been made bald.

Impetigo of the left cheek; permanent alopecia; Siroux, a dyer, was attacked when two years old with impetigo of the left cheek, and since this time the same disease has recurred repeatedly. He had been twice a patient in the Hôpital St. Louis, and I had myself had him as often under my care on account of it. The disease has constantly recurred upon the left cheek, between the temporal region and the chin, and between the ear and nose. In some of the previous attacks, the beard of this side of the face had fallen out, and in many places had never reappeared. There are now but a few straggling and colourless hairs, which may be pulled out with the greatest ease. On the right side the beard is rather strong. It is probable that the repeated attacks of inflammation of the left cheek, have ended by destroying or altering very materially the piliferous bulbs of the part and rendered them incapable of performing their office.

Scots, &c. I knew two individuals whose hair had become prematurely white from strong mental emotion—fear and anxiety.

(a) Men are much more frequently affected with alopecia than women.

<sup>1</sup> Galenus. Comment. ap. Hippocratem. De Nat. Puer. xix. 4, et seq.—Cæl., lib. v. sect. 28, etc. De Leuce.

<sup>2</sup> Alberti. Diss. de canitie præmaturâ. Hal., 1729.

<sup>3</sup> Danz met with two Jews who had neither hair nor teeth. (Starks, Archiv. fuer die Geburtshülfe, Bd. iv. p. 884.)



4thly. One of the most remarkable varieties of alopecia, is that which Willan has described under the name of *porrigo decalvans*.<sup>1</sup> The scalp, or skin of the chin and cheeks of individuals affected

extract from an article on the subject, by Dr. Todd, in the *Cyclopædia of Practical Medicine* (p. 72-3):

"Alopecia may be a *sympathetic* affection, not a symptom of a constitutional disease, but caused by a diseased or disordered state of some other organ or system of organs. The most common form of this description which has come under our observation, is that which proceeds from chronic inflammation of the mucous membrane of the stomach, giving rise to a particular form of dyspepsia, which has, for this reason, been called *inflammatory*. Of this nature, probably, was that mentioned by Galen (*De Cur. Morb. Sec. Loc.*, lib. i. cap. 2.) arising from eating poisonous mushrooms; and that other noticed by Hippocrates (*De Internis Affectibus*, sect. 4.), in which the reader will readily recognize a well-marked case of the above-named form of dyspepsia (*gastritis chronique*), and to which case there is, in an excellent record of modern medicine, (*Journal des Progrès*, 1830, tom. ii. p. 43,) a parallel in form as well as in cause, and which, it is deserving of attention, was afterwards succeeded by an attack of diabetes mellitus. Of the same nature, also, was in all probability that species of alopecia termed by the Arabians (*Avenzoar*, *Avicenna*), *bilious*, in contradistinction to the other species which they called *phlegmatic*; which last, in all appearance, corresponded with that form described by Celsus as most difficult of cure, 'pejus est quod densam cutem et subpinguem ex toto glabrum facit,' coinciding with the observation of some modern writers, that if the skin is pale or insensible, and it is difficult, by friction, to produce redness, the case is irremediable. Of the same nature is the case given by Lemery, of a man, who, some months after excessive catharsis, lost successively all the hairs from his body; and also another strikingly singular case, which, both in its cause and its cure, justifies the opinion which we have ventured to give of the nature of this species of alopecia. It is so illustrative that no apology is required for relating it. "Lodovico Gnemmi, a Piedmontese, fifty-seven years of age, a person of great vivacity of temper, of a plethoric habit, but spare form of body, having the skin of a dull white colour, began, in the winter of 1825 and 1826, to feel severe pains in the head, with a sensation of burning heat over all the body, but most particularly in the skin; it was to such a degree, that, during the coldest night of winter, he was obliged to throw off his bedclothes. After having passed fifteen days in this painful state, he began, by degrees, to lose all the hairs of his head, then those of the beard, eyebrows, eyelashes; and in the course of a month, there was not to be found a hair upon the surface of his body, neither in the arm-pits, on the breast, on the genital organs, surrounding the anus, nor upon any of his extremities. All his skin was as smooth as polished marble, and the slightest trace of hairs could not be felt by the hand. He remained for two years in this state, so deformed by the loss of his hair that he hardly ventured to show himself in public, but always feeling on the surface of his body a sense of pungent acrid heat, more especially on the surface of the scalp, which was always morbidly sensible and painful to the touch. In the beginning of March, 1828, he was attacked with a severe peripneumony, which was treated and cured by the most active antiphlogistic remedies, viz.: low diet, general and local blood-letting, cupping, purgation, blisters, &c., and, strange to say, under the influence of this treatment, on the decline of so severe an inflammatory disease, and in a state of the greatest weakness of the circulation, the hairs which had disappeared for the space of two years, began again to shoot forth, and continued to do so during all his convalescence. On their first appearance they resembled fine soft wool, almost colourless wool; but they continued, every day, to approach nearer to their natural character, which they had fully recovered at the end of a month, when, owing to some imprudence in regimen, he was seized with an acute attack of gastro-enteritis, which carried him off." (*Journal des Progrès*, tom. xiv. p. 244.)

"Of the same nature, also, are many cases of partial alopecia (por-

with this disease, presents one or more circular patches, entirely divested of hair, though surrounded with as thick a growth as is usually met with. The skin of these patches is smooth, without redness, and often even of remarkable whiteness. The areas of these patches extend gradually. When several exist near each other, they often end by uniting,<sup>2</sup> and if allowed to go on unchecked, a large portion of the scalp may be thus completely stripped of its covering. Neither vesicles nor pustules, nor any other form of eruption exists on the surface of these patches. *Porrigo decalvans* differs essentially in this particular from the partial baldnesses which are observed after favus, the annular syphilides, &c.

The first hair reproduced on the surface of these bald patches, the skin of which, as has been said, very often appears somewhat blanched, is generally finer and of a lighter colour than the old hair in its vicinity. I have observed this affection both among children and adults. I am not acquainted with the cause or causes which occasion it.

1224. The Messrs. Mahon, under the title of *teigne tondante*,<sup>3</sup> have described a disease of the scalp, which both in its form and in many of its characters, resembles *porrigo decalvans*, but which differs from this affection in the appearance of the surface affected and the presence of several altered and brittle hairs. On one or more circular patches, the hair appears broken off to within a line or two of the skin. The surface of these patches is extremely dry, and presents *asperities*, cognizable by the eye, but especially by the touch, like the skin of a fowl. The part affected is slightly bluish, and by scratching, a fine and very white powder can be detached from its surface. The affection begins in a point which spreads from its circumference; a similar spot often forms in the neighbourhood of the one which appeared first, and the two may unite; the authors quoted have thus, in three or four instances, seen the head become entirely bald, and covered with *asperities*. They have observed the affection among several members of the same family.

This variety is extremely rare; I have only seen a single case of it in a child.

1225. Alopecia is occasionally a symptom of constitutional syphilis. This effect of the venereal poison, which is mentioned by Ragonus, Fallopius, Massa, and Fracastorius, differs from the partial baldness occasioned by the development of syphilitic tubercles or ulcers, inasmuch as the skin does not appear altered. Alopecia from this cause is extremely rare at the present day.

1226. The existence of mercurial alopecia is extremely equivocal.

(*porrigo decalvans*), which we have observed in adults as well as in children, and which we have had the satisfaction of remedying by treating the primary disease—chronic gastritis, or inflammatory dyspepsia.

"This origin of alopecia also accounts for the connection which we have observed between it, lichen, urticaria, and pityriasis; sometimes coexisting; sometimes succeeding each other; all differently modified operations of the same cause.

"To this description of alopecia ought probably to be also referred those which have been attributed to the use of certain kinds of food, and which have been said to prevail at particular places. Thus it is said not to be unfrequent in countries where the inhabitants live chiefly on fish; as, for instance, formerly in the Shetland Islands, where baldness from this cause was so common, that it was a familiar saying that 'there was not a hair between them and heaven.' (Sir R. Sibbald's Description of Shetland.) Thus Tournefort relates, that in the island of Mycone, one of the Cyclades, the children are either bald, or seldom arrive at the age of twenty without being so. And, though it is difficult to assign the cause, it must be acknowledged that alopecia (*porrigo decalvans*) has appeared to be more common at Brighton than in other places, and that all the cases the writer has observed in this place have afforded symptoms of chronic irritation of the mucous membrane of the stomach."

The influence of constitutional causes, by enfeebled or perverted nutrition, is manifested in the falling off of the hair during phthisis; and after protracted fevers, and gout and rheumatism. Pregnancy is sometimes an exciting cause.

<sup>1</sup> Dr. Elliotson met with a case of extensive *porrigo decalvans* in a child, who was at the same time affected with symptoms of a disease in the brain. *Lond. Med. Gaz.*, vol. vii. p. 639. *Ibid.*, vol. viii. p. 30. *Ib.*, vol. xi. p. 229.

<sup>2</sup> This is probably the state which the ancients described under the name of *ophiasis*.

<sup>3</sup> Mahon. *Rech. Sur les Teignes*, p. 133.



I have seen a great number of gilders, silverers of mirrors, &c., in the different hospitals of Paris, affected with tremblings and paralysis of the limbs, but in none of them did the mercury appear to have exerted any unusual influence on the hair. (a) Nevertheless in Forestus we read of the *loss of the hair*, accompanied with trembling of the extremities, and other accidents produced by mercury in a young gilder, eighteen years of age, (Forest, Opera, lib. viii. obs. 5). Arsenic would seem to have a more direct action upon the hair follicles of the skin; it consequently enters into the composition of a number of *depilatory* preparations. (b)

The beard may be affected with the whole of these varieties of alopecia, even with the affection denominated *porrigo decalvans*. It is more rarely that we observe the transient or permanent loss of the hair of the trunk and extremities.

Alopecia has been seen evolved on one side only of the body. There is a case related by Ravaton, of a man, who, after a violent paroxysm (of rage), was attacked with amaurosis of the right eye, and with blanching and loss of the hair, eyebrows, and eyelashes of the same side.

1227. Alopecia, to conclude, may be *general*.<sup>1</sup> The hair of the head, axillæ, pubes, &c., is then lost gradually and successively. Lemery tells us, that a man, after enduring hypochondriasis for several months, observed the hair gradually falling off all parts of his body. At the end of a year from this time his body was still naked; the beard, which had formerly been strong, was now extremely thin; the hair alone had come in as thick as ever, but much finer in its quality.

We have just seen, says Peter Frank, a young man attacked with *general alopecia*. Except having had the venereal disease, from which he recovered, about thirteen years before, this patient has never been unwell; his health, indeed, at this time appears to be perfectly good. Nevertheless, about two months ago, he lost the whole of his beard, almost his entire head of hair, his eyelashes, and the hair of the pubes. The nails are, at the same time, lifeless, and consumed by a kind of dry sordes. The whole of this man's organic and animal functions appear to be in a state of perfect integrity; the sexual appetite is not implicated, and his voice is unchanged. He only complains of a feeling of weakness during the last few days. (c)

1228. *Treatment*.—The baldness of old age is incurable. *Congenital* alopecia is generally the effect of a tardy development of the hair which does not appear till towards the end of the first or second year. In some very rare cases this baldness is permanent, in consequence of the follicles being wanting.

The treatment of *accidental* alopecia is as various as that of the conditions which give rise to it. When it is occasioned by eczema, impetigo favus, &c., no other form of medication is required than such as is proper in these diseases. When these get well the hair sprouts naturally of itself,<sup>2</sup> unless the bulbs have been deeply altered, when no kind of *trichogenous* pomatum or oil avails to make it sprout again. When the skin is dry, tense, and furfuraceous, it is often well to shave the parts affected, and to anoint them with oil, or any other unctuous substance.

In the affection called *porrigo decalvans*, and in all those cases of baldness that do not appear to be accompanied with inflammation of the skin, and consequent implication of the piliferous bulbs, we have been recommended to stimulate the parts affected with decoctions of

walnut-tree leaves, of the leaves of the *solanum nigrum*, of the *centaurea minor*, of mustard-seed, or with vinous or spirituous aromatic washes of various kinds, with unguents of cantharides, embrocations of the essential oils, as of the thyme, lavender, chamomile, &c., but I cannot take upon myself to say how far these applications are calculated to determine or to increase the secreting powers of the piliferous bulbs, having employed them all, without any very evident advantage, in different cases of the affection entitled *porrigo decalvans*. [The translator has known the *common mercurial ointment*, used upon the patches, useful.] (d)

The *tinea tonsura* (Mahon) is also a very obstinate affection.

#### Historical Notices and particular Cases.

1229. Baldness (the *μαδαρόσις*, *φαλακρόσις* of the Greeks, the *calvities* of the Latins), was anciently distinguished from the morbid fall of the hair, entitled *ἀλωπεκία* and *ὀφίασις*, the skin, in these affections, being blanched in the parts implicated. Both of these varieties have been included by Celsus, under the name of *area*; *ophiasis*, in fact, does not differ from *alopecia*, save in its serpentine form. The fall of the

(a) Dr. Todd (*op. cit.*) thus sums up the treatment of alopecia.—It would be difficult to say as much to the point, in the same compass.

“From the distinctions of the different forms of alopecia which we have endeavoured to point out, may be easily understood how it may sometimes have been cured by phlebotomy; by local depletion, as leeches, scarifications, and acupuncture; by purgatives, low diet, and other antiphlogistic remedies; how, at other times, simple local means may have succeeded better, as friction, no matter whether with the fat of the mole, the snake, the hedgehog, or the bear; or with warm exciting substances, as camphor, turpentine, naphtha, laudanum, resin; with volatile oils, as those of laurel, rosemary, mace, or cinnamon, or with the distilled water of bees-wax; with acrid substances, as thapsia, euphorbium, stavesacre, nasturtium, mustard-seed, garlic, onions, and tincture of tobacco; with irritating applications, as friction with fig-leaves, nettles, tincture of cantharides, and even the application of a blister; how at other times advantage may have been derived from alkaline ingredients, which explains the use of the laxisia of wood-ashes, of burnt-cane, of the burnt hair of bears, and of applications containing the bile of different animals, and the ordure of birds, as the ancient remedy of *stercus columbinus*; how at other times such astringent applications as alum, cimolian earth and wine, or green vitriol, the *atramentum sutorium* of Celsus, may have answered better; and how, whatever be the form of the disease, or the nature of the treatment, the frequent shaving of the diseased parts, which has been recommended by all writers, is a remedy always applicable.

“When there exist signs of an inflammatory state of the pilous follicles, or erythema of the surrounding skin, leeches may be applied with benefit, and a course of purgative remedies is of great service. But when the disease of the follicles appears to arise from an inflammatory state of the mucous membrane of the stomach, leeches must be applied to the *scrobiculis cordis*, and a regimen of mild bland diet must be insisted upon. In the first case the best local application is any mild demulcent liquid, as decoction of bran, or mallows. But when the skin, from which the hairs fall, indicates a deficient degree of vitality, the parts may be excited by local stimulants. (R. *olei macis* ʒii; *alcohol* ʒiv. M.) Penciling the surface with a solution of nitrate of silver, or rubbing it with a liniment of olive-oil, and as much nitric acid as makes it pungent, but not acrid, has been found to answer the same purpose. Of the use of the celebrated oil of Macassar in such cases we have no experience, but the solution of sulphate of copper in alcohol, lately very much recommended by a German physician, has failed in our hands. When the skin is furfuraceous, or the cuticle hard, shining, and impermeable, like parchment, it is of great use to wash it frequently with some alkaline or sulphurous solution (R. *Liq. ammoniæ acetatis* f.ʒii; *ammoniæ carbonatis* ʒii; *alcohol* f.ʒss; *aq. fontan.* f.ʒiv. *Fiat lotio*). But when either of the foregoing states of the skin is connected with a deranged state of the general health, it is unnecessary to say that this demands the chief attention.”

(a) Mr. Lugneau (*Diction. de Med.*), participates in this opinion.

(b) Late hours, and their frequent concomitants, intense thought, dissipation, also excessive venery, rank among the remote causes of alopecia.

(c) Syphilitic alopecia has been already described (§ 925).

<sup>1</sup> Heister (*Misc. Nat. Cur.*, dec. 1, ann. ii. obs. 103). P. Frank (*Epitome de curandis hom. morbis*, t. iv. p. 124), and Wells (*Transact. of a Society for the improvement of Medic. and Chirurg. knowledge*, vol. ii. pp. 264–267), have related cases of general alopecia. There is one particularly detailed by Negronis, in the *Journ. Gén. de Méd.*, vol. v.—*Dict. de sc. méd.* Art. *Cas rares*. General alopecia has been seen to follow intermittent fever. (*Gaz. des Hôpitaux*, t. vii. p. 422.—*Gaz. Méd.*, 1834, p. 564.)

<sup>2</sup> When the hair is reproduced, after alopecia, it is not always restored of the same colour as that which was lost. (L. Lemery. *Obs. d'un homme de 45 ans, robuste et fort velu, lequel perdit son poil, qui était noir et qui revint blond*.—*Mém. Ac. sc. Paris*, an. 1702, hist. p. 29.)



eyelashes received the name of *ptilosis*, from the Greeks, and this title it has retained. Mercuriali treats of these affections at length; but he ought to have distinguished them from the fall of the hair—the *degluvium capillorum*, which occurs as a consequence of many acute diseases.

The loss of the hair, as a disease, or a symptom of disease, has not been viewed as possessing so much importance in modern times, except during the prevalence of Greek elephantiasis and syphilis, in the middle ages, when it constituted one of the striking features in these diseases.

Willan, as the name implies, chose to class circumscribed alopecia among the porrigo, with the epithet *decalvans*.

CASE CXc.—*Alopecia of the scalp, under the form of circular patches. Alopecia circumscripta* (Porrigo decalvans, Willan). A. T. Doucet, eight years and a half old, was presented among the out-patients at the Hôpital de la Charité, June 16th, 1827. This child is well grown for his years. He has laboured for several months under partial alopecia of the scalp, in the form of circular irregularly circumscribed patches. The oldest of them appeared about seven back, on the upper and posterior part of the head, and has extended gradually, till it is now an inch and a half in diameter. Examined narrowly, its surface is found to be covered with a considerable quantity of fine downy colourless hair. Other three patches were formed from three to four months ago; the largest of these is an inch in diameter. The skin is free from all traces of inflammation; neither is there any desquamation from the parts affected. The patches are smooth, and look paler than the rest of the scalp; the hair is as thick immediately around them as it is elsewhere. The fall of the hair goes on circularly and without changing colour previously; the fall is certainly owing to an affection of the secreting bulb, the precise nature of which it is impossible to specify. There are a good many pediculi on the surface of the scalp, which is quite free from vesicles, pustules, seabs, &c. The affection seems to implicate the piliferous bulbs alone. The father of this child informed us that he had never had any thing the matter with his head beyond what we saw. The glands of the neck were neither painful nor enlarged; the principal functions were regular. The father, having informed us that the down upon the largest patch had appeared since he had rubbed the part with butter, I recommended him to continue the same application.

CASE CXCI.—*Partial alopecia of the scalp and beard, preceded by blanching of the hair over the affected patches.* O. Duvau, twenty-five years of age, of a sanguine temperament, having chestnut hair and a brown beard, presented himself among the out-patients at the hôpital de la Charité, April 4th, 1827. On the left side of the chin there was a whitish circular patch, twenty lines in diameter, devoid of beard on a cursory view, although, when examined more narrowly, it was found to be beset with a fine, soft, and colourless down. The spot was the more remarkable from being bounded by the brown stubble of the beard. The hair began to be detached from it from eight to ten months ago; and it enlarged circularly, from the centre towards the circumference. Another small spot, about half an inch in diameter, occurs towards the middle of the lower margin of the jaw, and on the opposite side of the face there is a third spot, nearly of the same dimensions, which dates about four months back, and has long continued stationary. On the right parietal region there is a tuft of light hair, covering a surface of about an inch in diameter, which succeeded a corresponding tuft of the chestnut hair that suddenly became white, and fell off without any appreciable cause. Several of the individual hairs of the whiskers have turned in the same manner. Although the skin of the naked patches presents no signs of inflammation, the patient assures us that he feels a kind of numbness in the parts, and that their circumference, especially on changes of weather, is tender to the touch. The hair upon the axillæ and genital organs presents nothing unusual.

This patient had a gonorrhœa about eighteen months ago, that is to say, previously to the affection of the hair bulbs. He caught a second about six months since; in both instances he was treated by means of diluents, and the disease lasted several months; the naked patches showing no disposition to extend, and new hair even beginning to appear on their surface, I did not recommend any of the topical applications usually prescribed in these cases. I had but recently

gone the round of them without manifest advantage, in the case of a young man, affected exactly in a similar manner, for whom M. Bourdois de Lamotte was also consulted.

## SPECIAL DISEASES OF THE UNGUEAL MATRICES AND OF THE NAILS.

1230. The greater number of the alterations which the nails undergo depend on an affection of the portion of skin which secretes them. Still, they may be modified in their conformation and texture without the skin which produces them appearing to have suffered any appreciable lesion. Of this kind especially are the changes produced by the habitual contact of the alkalies, acids, neutral salts, various colouring matters, &c.<sup>1</sup>

1231. The portions of skin which secrete the nails, and which are in relation with them, are subject to inflammation of different kinds (*onychia*). They are also liable to a variety of other diseases, which are common to them and the other regions of the body, such as ecchymosis, eczema, psoriasis, lepra, &c.

### ONYCHIA.

1232. The matrices of the nails are liable to become inflamed during the course or as a consequence of different cutaneous phlegmasiæ. These pulpy and vascular tissues, however, do not present such a variety of forms of inflammation as the skin at large. I designate under the general title of *onychia*, the whole of the inflammatory affections of that portion of the corion which is in relation with the nails.

1233. Onychia may be *partial*, or *general*. It may occur on the edges or towards the root of the nail. It also presents specific characters according to the cause which has produced it, and as the disease assumes an *acute* or *chronic* type. The following varieties of the affection have been distinguished. 1st. Onychia from *outward violence*. 2d. *Lateral onychia*,—the nail growing into the skin. 3d. Onychia from an *internal cause* (*onychia eczematosa, scrofulosa, syphilitica*, &c.).

1234. Onychia from an outward cause.

1235. 1st. One of the most common varieties of onychia is that which is occasioned by contusions of the ends of the fingers, and by punctures under the nail. Punctures of this kind, though trifling in appearance, are often followed by acute inflammation of the matrix of the nail, characterized by heat, acute pain, and, by and by, the formation of a layer of pus between the skin and the nail. A quantity of purulent serum is now secreted around the nail, between it and the epidermis, which is detached after having been raised by pus effused beneath it. At length the nail drops off, after a lapse of time of various extent, the shorter commonly as the inflammation has been more acute; the dermis is then exposed, and a new nail is not in general long in being reproduced.

This inflammation, which has been classed by several pathologists along with panaris (*whitlow*), or phlegmon of the points of the fingers,

<sup>1</sup> Hippocrates studied the nails with reference to diagnosis and prognosis. De intern. affectionibus, sect. v. p. 549, ed. Foës.—Ibid. Prænotionum liber, p. 39.—De morbis: καὶ ὁ θυμὸς ἰκκύνται, unguis adunci. Celsus was the first who described onychia. Avicenna (Libri in re medicâ omnes, Venet., 1564, lib. iv.), speaks of the different alterations the nails undergo, of their inflammation, their fissures, their deformities, their becoming white, of sub-ungueal ecchymosis, &c. Sennertus (Opera, t. iii. De Unguium vitiis, p. 858), mentions the greater number of the affections to which the nails are subject: "Ungues crassi, inæquales, rugosi; unguium labrities; unguium color mutatus; curvatura unguium; fissura unguium; unguium casus; redutivæ; paronychia." The diseases of the nails have in fine been especially studied by Franc. de Franckenau (Geo. Fred.) (Onychologia curiosa, sive de unguibus tractatio physico-medica, non tantum eorum physiologiam ac therapeiam tradens, etc., 4to. Jenæ, 1641), Werner (Diss. de unguibus humanis varioque modo quo possunt corrumpi, 4to. Lipsick, 1773), Bleck (Philipp. Ed.) (De Mutationibus unguium morboris, cum tabula æneâ, etc., 4to. Berolini, 1816), and Patissier (Art. Ongles, Dict. des Scienc. Méd.).



is, however, a very different affection. It commonly resists emollient applications, fomentations, the local abstraction of blood, &c. When it is caused and kept up by a foreign body under the nail, this part must be cut and scraped down, until nothing more remains than a thin, soft and unresisting lamina, and this being divided, the pus which has been secreted is allowed to escape, and the foreign body is easily extracted. This plan of proceeding is much better than to divide the nail forcibly and at a single stroke either of the knife or scissors.

1236. When this kind of onychia is caused by a *bruise*, the nail may be split; the matrix then becomes deeply altered, secretes, for a great length of time, a sanguinolent and very fetid matter, and the skin and subjacent cellular membrane often become the seat of most painful inflammation, which must be treated by absolute rest of the part, general blood-letting, the local application of *leeches*, emollient cataplasms, and fomentations, &c. Among the aged, and in scrofulous subjects, a wash of a solution of chloride of lime is successfully used to destroy the fetid odour of the discharge.

1237. 2d. A second and not less remarkable variety of onychia is that which is commonly spoken of, as *the nail growing into the flesh*.<sup>1</sup> This affection is often the result of the mechanical irritation accidentally caused by the nail in consequence of a faulty configuration, irregular growth, a great convexity, &c., of the part. It is also induced, perhaps more frequently than by any other cause, by the pressure of tight shoes.

1238. The great toe, and especially its outer edge, is almost always the seat of this kind of onychia; it is at all events extremely rare in the other toes, and never occurs in the fingers. In the beginning of the affection the patient experiences a certain degree of difficulty in walking, to which he very commonly pays little or no attention; the pain, however, increases, and the skin where pressed upon by the edge of the nail gives way; walking now becomes almost impossible; an ulcer is formed covered with sprouting fungi, so acutely painful as to prevent the patient from putting his foot to the ground. At a still later stage, the inflammation extends to the root of the nail, which then becomes partially loosened. The patient, if he attempts to walk at all, can now only do so by resting his heel on the ground. The suppuration is often profuse, being poured out from the surface of a soft and spongy fungous mass, and is rendered more offensive by being mixed with that of the perspiration of the feet. When left to itself, the fungous growths become larger and larger, and the inflammation sometimes extends to the periosteum and bone.

1239. This variety of onychia is said to have been mistaken for gout in a particular case. Such a mistake could only have arisen from a very superficial examination of the parts affected. It is more difficult to distinguish the accidental form of the disease now described from certain other varieties. Still, as Dupuytren has judiciously observed, the fungous excrescences to which partial lateral onychia, caused by the mechanical irritation of the nail, gives rise, occur in front of and on the side of the nail, whilst in the onychia that is independent of this cause, the fungous excrescences commonly sprout from the root of the nail.

1240. When *lateral accidental* onychia has only existed for a few weeks, and the affection has evidently arisen from the pressure of the soft parts against the edges of a hard and crooked nail, this may be cut away or reduced in its thickness, whilst the pressure of the neighbouring toes is prevented by a pad of cotton or wool put between these and the suffering member; and this, with rest for a time, the use of emollient cataplasms and fomentations, and a shoe sufficiently easy afterwards, will often prevent the disease from going further, and even effect its cure. But when one of the edges of the ungual matrix is deeply cleft, ulcerated, and covered with fungous excrescences, other steps are required to remedy the evil. Albucasis and Paul, of Ægina, recommended us to detach the nail from the neighbouring parts, with a probe, and after having raised it, to remove the fungous excrescences surrounding it with a knife, and afterwards to

touch the surface with some form of liquid caustic. The actual cautery was also once in vogue for this disease, and has been used lately by Mr. Wardrop. Ambrose Paré directs us to push a straight edged bistoury through the base of the soft parts covering the nail, to remove these, and then to cauterize with the red hot iron. This procedure of the old surgeon has been recently employed by Messrs. Lisfranc and Brachet, with success. Fabricius ab Aquapendente recommended little pads of lint to be insinuated under the edge of the nail raised and gently loosened from the parts below it, and the fungous excrescences to be flattened by direct compression. Desault modified this procedure, and placed a piece of tinned iron of proper breadth and bent into a gutter, between the edge of the nail, and the soft parts around it, at the same time that he used compression to reduce fungous flesh. Richerand proposed to replace the tinned iron plate towards the end of the cure by a piece of sheet lead. This mode of treatment, which is both painful and of difficult execution, is frequently followed by relapses. M. Guibourt advises the half of the nail on the healthy side to be cut away by thin lamellæ. The nail being then no longer compressed on this side, grows towards it, and escapes from the tender and irritated structures of the diseased side, so that at length the cure is accomplished. Faye would have us to reduce the thickness of the middle of the nail in the direction of its length by scraping, then to make an incision in the form of the letter V, the base towards the free end of the nail, removing the parts included between the legs of the letter, and lastly, by means of a fine metallic wire, passed through holes drilled in the free extremity of the nail, to approximate the edges of the wound. The portion of the nail that presses in upon the quick is thus elongated from the tender parts, and the cure is effected. Dupuytren employs the following plan. The patient is seated on a chair before the surgeon, who passes one blade of a pair of straight, strong and sharp scissors rapidly under the middle of the nail nearly to its base, and divides it at a single stroke. He then, with a pair of pliers, seizes that half of the nail which keeps up the disease, by its anterior part, or both halves in succession, according to circumstances, and by turning each back upon itself, detaches it from its connections with the matrix. He next applies the actual cautery to the fungous growths, if they chance to be very considerable. This procedure is extremely painful; but it frequently leads to a speedy and permanent cure.

1241. Onychia from an internal cause.—Five principal varieties of this affection are reckoned: 1st. Onychia *eczematosa*; 2d. Onychia *squamosa*; 3d. Onychia *scrofulosa*; 4th. Onychia *syphilitica*; and 5th. Onychia *maligna*.

1242. 1st. *Eczematous* onychia generally attacks the matrices of several fingers or toes, at the same time that eczema appears on some region or other of the body. I once saw an old man above eighty years of age, who, at the age of twenty-one, had had an attack of gout for the first time, and had every year, for nine successive years, had a severe return of this complaint. A milk diet continued undeviatingly for three years, interrupted these renewals of the gout, which was thirteen years in showing itself again. Since then it has recurred at various intervals, five or six years generally elapsing between each new attack. This old man remembers to have had a *tettery affection* of the axillæ when he was about eighteen years of age, which was attended with considerable discharge. For the last twelve years he has been subject to eczema, at one time in the squamous, at another in the humid state, between the buttocks and about the margin of the anus. Two years ago an affection of the same kind made its appearance about the nails of the toes, and subsequently about those of the fingers. The nails of the toes are particularly remarkable for their deformity; they are of a greenish-yellow colour, and are detached from their matrices, being raised upon a mass of solid matter of the same colour, and of a faint and sickly smell, three or four lines in thickness, which even extends beyond their ends and edges. The nails are painful when cut, the action of the knife or scissors jarring the roots. A yellowish liquid matter occasionally exudes from under the lateral parts of the nail, which are then more than usually painful. I did not recommend any active form of treatment in this case to the eczema of the breech and nails. The patient was merely advised to keep the parts clean, and small doses of sulphur were prescribed internally. It is now three years

<sup>1</sup> Royer-Gollard (Hypopl.). De quelques altérations des ongles et de la peau qui les environne (Répertoire général d'Anatom. et de Physiolog. Patholog., etc., 4to. t. ii. 1826).—Robbe (L. C.). Que l'affection désignée sous le nom d'ongle rentré dans les chairs se compose de deux affections entièrement différentes par leurs causes, leur nature et leur traitement, 4to., 1826.—Michaelis. Considérat. sur l'ongle rentré dans les chairs. (Journ. complém. des sc. médic., t. xxxviii. p. 373.)—Lawrence. Lectures on onychia and paronychia. (Lond. Med. Gaz., vol. vi. p. 226.)



since he consulted me, and, notwithstanding his great age, his general health has improved.

I once gave my advice to a woman who was affected with a running eczema, entirely confined to the last phalanges of the fingers, and even to the parts over the roots of the nails, without implication of their matrices.

1248. I have already given the characters of *squamous* onychia (686), of *scrofulous* onychia (739), and of the onychia that is a consequence of the venereal disease, (926). To complete the history of this form of the affection I subjoin the two following cases from M. Lelut's paper.

CASE CXCH.—*Venereal infection. Onychia.* J. L., a widow woman, aged thirty-seven, underwent a mercurial course for the first time at the hôpital des Vénériens, on account of an eruption of pustules upon the skin, and a discharge from the vagina. When the patient left the hospital the eruption had disappeared, but the discharge continued, and there was a slight sore at the left corner of the mouth. A week afterwards, this sore spread, aphthæ appeared in the mouth, and the eruption of the skin recurred. The patient was put anew upon a course of sudorifics, and of corrosive sublimate, and all symptoms of disease disappeared, except the leucorrhœa. In the month of September, the patient, to relieve a violent headache, put her feet into hot water with a quantity of flour of mustard in it. Almost immediately afterwards the toes of the right foot became chapped; the parts around the nail of the left forefinger next inflamed and suppurated, and the left thumb, the right forefinger and thumb, and all the toes of the right foot became affected successively in the same manner. The patient returned for the third time to the hospital on the 10th of October, labouring under the infirmity described, incapable of walking or of using her hands. (*Emollients; leeches to the back of the right foot; veal broth.*) 13th. The nail of the left finger was taken away. 20th. The extremity of this finger has the form of a spatula; red vascular lines appear on the back of the left hand (*leeches*). The last days of October, tumefaction of the lymphatic glands of the inner aspect of the left arm (*the sore of the great toe only dressed with calomel ointment*). The nails of the thumbs are forced forwards without being completely loosened from their matrices. The horny laminae of the nail appear on the matrix of the left forefinger; the sore of the great toe, behind the root of the nail, bleeds: the nail of the right forefinger is taken away; new horny lamellæ show themselves on the back part of the sore of the left forefinger, and by and by on that of the right. Nov. 5th. The nail of the great toe removed. The whole of the sores are dressed with a weak solution of chloride of soda in water. No mercurial medicine is prescribed; the sores are all cicatrizing. The thumb nails are growing with all their normal characters. Nov. 21st. A piece of the nail of the great toe that had been left is taken away, and the sore soon cicatrizes, but no new nail is reproduced. The sores of both forefingers are also healing around the horny plates of the matrix. Dec. 2d. The nail of the left great toe is detached spontaneously without pain. 5th. The patient left the hospital with the whole of the ulcers cicatrized.

CASE CXCHII.—*Venereal infection; onychia.* A. M\*\*\*, aged twenty-two, a prostitute, was discharged from the Hôpital des Vénériens, in the month of August, 1826, after having gone through a mercurial course for an eruption of flat tubercles about the vulva, and a discharge from the vagina. On quitting the hospital, there were symptoms of incipient inflammation of the soft parts covering the ungueal matrix of the left forefinger. The right forefinger and great toe soon afterwards became affected in a similar manner. The patient returned to the hospital on the 21st of September. The nails of the fingers mentioned are partially detached; the suppuration under them is profuse and very fetid. The patient is put anew upon a course of the solution of corrosive sublimate, and afterwards of sudorifics. The sores are dressed with emollients and anodynes alternately, and the nails are extracted. The suppurating surfaces then look red and uneven; they are extremely tender, and surrounded with a prominent rim; the pain is very severe; the patient is incapable of walking; she sleeps badly, although she has a pill every night, containing a grain of the extract of opium. The sores bleed when exposed to the air; they are dressed with solution of chloride of

soda, and two grains of opium are prescribed instead of one. Leeches were subsequently applied to the left finger. The sores continue nearly stationary. In the beginning of November, anomalous horny plates begin to appear upon the matrices of the right forefinger and great toe; but the sores in general do not appear to have improved. Nov. 14. The nail of the forefinger is taken away. The anomalous horny plates increase in extent. The sublimate is continued. In the beginning of November, these horny productions are taken away, and the diseased ungueal matrices are touched with the actual cautery. After the detachment of the eschars, fresh anomalous horny plates are secreted by the matrices. The suppuration is still fetid, and the patient walks with great difficulty.

1249. Under the name of onychia maligna, Mr. Wardrop<sup>1</sup> describes an inflammatory affection, characterized in its earliest stages by a slight degree of swelling and a red circle surrounding the root of the affected nail. The thumb and great toe are much more frequently the seat of this affection than any of the other toes or fingers. The kind of crescent formed by the skin over the root of the nail by and by changes into a roll of a purple red colour, more elevated and more acutely sensible at the point where the nail appears to adhere most intimately; this is before long occupied by bleeding and fungous sores. Purulent matter, of a brownish, grayish, or greenish-yellow colour, generally very copious in quantity, extremely offensive in its odour, and often mixed with blood when the affected parts have been exposed to the air, exudes between the root of the nail and the skin. The nail thickens, loses its colour, becomes of an earthy yellow or blackish-green hue, and is detached at its root, when it deviates from the side which happens to adhere most intimately, and soon leaves the greater portion of the matrix from which the root has receded exposed. At length it falls spontaneously, or is easily taken away, when small portions of its substance are frequently left on the anterior and posterior part of its matrix. Thus divested of its natural covering, this secreting organ looks red, uneven on the surface, inflamed, overspread with yellowish or grayish fetid pus, surrounded with an inflammatory roll, which bleeds when brought into contact with the air, or when the diseased fingers are moved. It generally happens that pretty broad horny productions are now eliminated from the surface of the diseased matrices. These are soft at first, and for some time seem to blend and be confounded with the concrete pus that adheres to them; they are of a brownish, often of a greenish-yellow colour, and shoot in general obliquely, sometimes perpendicularly, from the middle or edges of the matrices. Two or three of these of smaller size are often seen uniting into one more or less irregular in its shape. These abortive ungueal productions often appear to keep up irritation, and the finger then acquires the form of a spatula. The inflamed skin which surrounds the horny productions bleeds when exposed to the air, and is the seat of pain of the most intolerable kind. Red lines on the affected parts announce the extension of the inflammation to the lymphatic vessels, or to the neighbouring veins. If the toes be the seat of the affection, walking is impossible. A febrile state frequently accompanies the disease when arrived at this severe stage; and sleep, entirely broken, cannot always be procured by the exhibition of opiates.

This variety of onychia,<sup>2</sup> the cause and nature of which are but little known, is not to be confounded with the two preceding varieties. And yet the *nail in the flesh*, when it has been long neglected, or aggravated by irritating topical applications, fatigue, &c., does occasionally assume very many of its characters.

Onychia maligna is always a troublesome, protracted, and painful disease.<sup>3</sup> Cases have been seen in which six months of sedulous

<sup>1</sup> Wardrop. On diseases of the toes and fingers, in *Med. Chirurg. Trans.*, vol. v. p. 129, 1814.

<sup>2</sup> A young man, eighteen years of age, who had never had venereal disease, after a severe attack of dothineritis, had onychia in both of the great toes, which got well under the use of the sulphureous bath.

<sup>3</sup> A man, twenty-six years of age, had suffered from suppuration around the outer edge, first of his right great toe nail for two years, and next of the same part of the left foot, which he ascribed to the pressure of too tight boots. The parts on the anterior lateral aspect of the right toe were removed, and the wound touched with the nitrate of silver. Four days after this, fungous excrescences arose on the inner edge of this toe-nail, for which nothing was done. June 6th. 1834. The nail of the right great toe appears of a pale rose colour; its conformation and thickness are natural. The edges of the ungueal matrix are red, painful, and in a state of suppuration. The



treatment have scarcely produced any apparent amendment. It rarely gets well under the antiphlogistic plan. Mr. Wardrop found mercurials of more avail. Frequently the only recourse that is left us, is to destroy or to remove the ungueal matrix entirely. In performing this operation, M. Dupuytren was in the habit of seizing the affected finger or toe between the thumb and forefinger of his left hand; with a convex-edged scalpel in the right, he then made a semi-lunar incision, the concavity pointing forwards, upon the dorsal aspect of the digit, at the distance generally of about four lines behind the roll of integument overlapping the root of the matrix; the flap was then seized with a pair of forceps and dissected off. The wound that results from this operation generally cicatrizes in from a fortnight to three weeks.

The following case appears to me deserving of being assimilated to onychia maligna:

CASE CXCIV.—*Chilblain, and contusion of the left great toe; onychia.* Sophia Brachet, twelve years and a half old, was admitted into the Hôpital des Enfants Malades on the 25th of April, 1827. Of sanguine temperament, and well grown for her age, she has never been affected with chronic inflammation of the skin or swelling of the lymphatic glands. Last winter the great toe of the left foot was affected with chilblain, which had got nearly well, when the toe was violently bruised, by some one treading on the child's foot. The ungueal matrix inflamed after this accident, became very painful, and poured out a profusion of fetid discharge. The child had to keep her bed for some time. During the first month of her stay in the hospital, local and general sulphureous water-baths were employed alternately without success. About the end of May the whole point of the toe was swollen and livid. The skin at the root of the nail formed a semi-lunar roll, nearly a line in thickness in its middle, which was ulcerated, fungous, blackish, or of a vivid red, according to the quantity of blood which had exuded from it. Two-thirds of the anterior surface of the ungueal matrix were in a state of suppuration; it looked like an elliptical hollow space, surrounded by a circular roll of tumefied and tender integument. The nail was perceived at the bottom of the hollow, its two anterior thirds detached from the matrix, raised, and turned back upon the dorsal aspect of the remaining adhering third. The nail was of a brownish hue, and traversed by transverse striæ. On the 30th of May the nail was seized with a pair of dissecting forceps, and removed. It presented something of the appearance of a miniature saddle. Its anterior part was rough and corroded; its posterior portion, which adhered intimately to the skin, was smooth and natural. (*Simple dressings.*) On the third day, the wound looked sanious; the suppuration was scanty. By and by the surface affected looked red, and secreted healthy pus; the violet hue and swelling of the skin, which had existed before the operation, had disappeared, and the wound began to cicatrize. June 8th. The sore somewhat sanious; and a new nail began to be seen at its upper part (*compresses watered with solution of chloride of lime*). The wound looked better; cicatrization advancing. 11th and 12th. The wound again became sanious; the cicatrice appeared to give way. The new nail advances apace; the swelling and violet colour of the toe recur. 13th. The sore is cauterized with the acid nitrate of mercury. 18th. The eschar produced is detached. 19th. The swelling and violet tint have almost disappeared. The sore is bright, and secretes laudable pus. If the disease recurs, the matrix of the nail will be excised.

#### Historical Notices.

1250. Celsus,<sup>1</sup> under the name of *περὶ γύριον*, appears to indicate the fungous excrescences that sprout from the inflamed matrices of the nails. He recommends these growths to be treated with cathartics, and, if the disease returns, to excise or to cauterize the matrix: "Si malum non vincitur, purgandus scalpello, tenuibusque ferramentis aduren-

surrounding skin, especially that which covers the root of the nail, is red but not broken. The great toe of the other foot is in the same state, but rather less inflamed. Eighteen months ago, the outer half of the nail was eradicated, and the surface cauterized. A new nail was produced, which causes the patient as much pain in walking as the old one. All the other nails are healthy. The patient has never been affected with syphilis.

<sup>1</sup> Celsus. De re medicâ, lib. v. sect. xix.

dum." Galen<sup>2</sup> specifies certain remedies against *paronychia*; Ætius<sup>3</sup> is more diffuse in his therapeutical principles. The description of the inflammation of the nails, which Paulus<sup>4</sup> gives very fully, bears considerable resemblance to the description of onychia *maligna* with which Wardrop has presented us. Paré was acquainted with the advantage of removing the soft parts implicated in lateral accidental onychia,<sup>5</sup> a procedure lately recalled to notice by M. Amussat. Still more recently, onychia has been made the subject of especial study by Dupuytren and his pupils.<sup>6</sup> I have already signalized the principal observations that have been made on scrofulous (729) and on syphilitic (926) onychia.

#### SUB-UNGUEAL ECCHYMOSES.

1251. Bruises of the dorsal aspect of the points of the toes and fingers are transmitted through the thickness of the nails to the pulpy substance upon which these organs are implanted, and frequently there occasion ecchymoses, and extravasations of blood often of considerable extent. When the nail is injured to its root, it is soon loosened and detached, after which it is replaced by a new one.

When any of the nails have been bruised, it is well to plunge the hand into cold water, and if pain and swelling afterwards come on, recourse should be had to emollient cataplasms; the processes by which the old nail is detached, and the new one formed, may then generally be left safely to nature.

When the fingers are crushed and wounded, and the nails broken and torn, those portions of these last that are half detached, should be cut away with flat scissors; those that adhere, though ever so slightly, should be left. To take them away at once would only cause a great increase of pain, and of the inflammation that must necessarily follow from the reparation of the injury that has been done.

When the nails are removed by a surgical operation, the matrices occasionally bleed rather profusely. This hemorrhage is readily commanded by compression and the use of some form of cautery.

#### FAULTY CONFORMATION OF THE NAILS.

1252. The nails may be *entirely wanting*, or be only imperfectly evolved. This deficiency, which occasionally appears to be hereditary, is extremely rare. Bleck informs us that there is a fœtus in the anatomical museum at Berlin, which presents this anomalous conformation of the fingers.

1253. The nails are occasionally lost *accidentally*, in consequence of injury, onychia and ablation. If their matrices have been superficially inflamed, they are reproduced, but not always with perfect regularity of shape.

1254. The detachment of the nail is a frequent consequence of acute or chronic inflammation of their matrices following a bruise, a burn, frost bite, venereal infection, and sometimes happening from no evident cause. But the nails are also occasionally lost, like the hair, in certain cases of alopecia, without their matrices appearing to be affected with inflammation at all (*alopecia unguealis*).

1255. The nails may be *faultily developed* in various degrees. In some individuals labouring under paralysis, the secretion of the nails appears retarded. When their matrices have been partially destroyed by ulceration, or removed, they are secreted ever afterwards uneven and imperfect.

1256. *Supernumerary* nails are also observed on the hands of individuals with six fingers. A man of the name of M \* \* \* had a supernumerary finger attached to each of the thumbs; one of these consisted of one phalange only; the other of two; both were furnished with nails, like the other fingers.

<sup>2</sup> Galeni. Opera omnia: De medicam., lib. iii. 89; Cl. vii. p. 339.

<sup>3</sup> Ætius. Tetrabiblos: ad paronychios, id est unguium abscessus, p. 796, fol. Basilæ, 1549.

<sup>4</sup> Paulus Ægineta. De re medicâ, lib. vi. cap. 85. De unguum pterygiis. Parisiis, 1532.

<sup>5</sup> Paré (Ambr.). Œuvres complètes, lib. xviii. ch. 32, fol. Paris, 1561.

<sup>6</sup> Lélut. Etudes sur l'onglade.



1257. The *anomalous growth* of the nails<sup>1</sup> constitutes a kind of deformity, the origin of which is not always the same. 1st. The nails left long to themselves, among the aged,<sup>2</sup> often acquire a considerable length. I had an old man under my charge lately, who had suffered for several years with prurigo and lichen, and who had allowed his nails to grow to the length of talons, in order to have a good implement always by him with which to allay the intolerable pruritus he endured. Rouhout, in 1719, sent a description and drawing of some monstrous nails, to the Academy of Sciences of Paris. The largest of these was the left great toe nail, which, from its root to its extremity, measured four inches and three quarters; the laminae of which it consisted were placed one over the other like the tiles upon a roof reversed. This nail and several of the others were of unequal thickness, and were curved variously, probably in consequence of the pressure of the shoe, or of the neighbouring digits. My friend, M. Bricheteau, physician of the Hôpital Necker, lately sent me two monstrous nails from the great toes of an old woman who had lived in the Salpêtrière. They are very thick, about three inches in length, and spirally twisted, like the horns of a ram. Saviard informs us, that, in 1817, he saw a patient in the Hôtel Dieu, who had a horn, like that of a ram, instead of a nail, upon each great toe, the extremities of which were turned to the metatarsus, and overlapped the whole of the other toes of each foot.<sup>3</sup>

1258. *Excessive growth of the nails* has occasionally been observed in individuals labouring under Arabian elephantiasis,<sup>4</sup> chronic rheumatism, and ankylosis of the joints; the skeleton of Simorre, preserved in the Museum of the School of Medicine of Paris, is remarkable for the ankylosis of all the articulations, and the considerable size of the nails. The fingers and toes, spread out and ankylosed, are terminated by nails of great length, and nearly of equal thickness. A woman of the name of Melin, surnamed *the woman with the nails*,<sup>5</sup> presented another and not less curious instance of the same thing.

Malformed nails of large size have also been seen among *children* and *adults*, who, at the same time, presented horny productions upon the skin. Ash has published the case of a girl, twelve years old, in the Philosophical Transactions,<sup>6</sup> upon almost every one of whose articulations there were horny growths tuberculated at their base, and hard at their summit. The fingers and toes, the knees and elbows, were beset with these productions, some of which were four inches in length. They fell off occasionally, and were replaced by others of the same description. Musæus<sup>7</sup> has given an account of a similar case: the nails of a girl, aged twenty, grew to such a size that some of those of the fingers were five inches in length. They were composed of several layers, whitish in the interior, of a reddish-gray on the exterior, full of black points. These nails fell off at the end of four months, and were succeeded by others. There were, besides, horny laminae on the elbows, knees and shoulders, which bore a perfect resemblance to nails, altered in their structure. These horny productions looked like talons; they were only sensible at their point of insertion into the skin. Various other parts of the body, particularly the backs of the hands, presented these horny productions; one of them was four inches in length. This horny growth appeared after small-pox.

1259. To whatever the anomalous growth of the nails be owing, it is well to remove those portions which project beyond the extremity of the finger or toe, to prevent them from interfering with the motions of the hands and feet. If not excessively thick, they may be cut off with a pair of scissors, after having been softened by soaking in warm water. Cutting pliers, or a fine saw, will always enable the operator to take them away without pain to the patient, when they are exceedingly strong and hard.

1260. The nails are sometimes *misplaced*. Th. Bartholinus tells us

<sup>1</sup> Several writers have given representations of these mal-formed and monstrous nails—vide commercium literarium Norimb., 1734, p. 173.—Eph. Nat. Cur., dec. 2, ann. 1, p. 385, fig.—Bartholin. Acta Hafn., i. obs. 16, epist. 2, pp. 732-737.—Malpighi. Op. Posth., p. 132, tab. 19, fig. 3, 6.

<sup>2</sup> Morgagni. De sedibus et causis morborum. Epist. 63, art. 6.

<sup>3</sup> Saviard. Nouveau recueil d'observations Chirurgicales, 8vo. Paris, 1702, obs. 127, p. 129.

<sup>4</sup> Hensler. Histor. brachii prætumidi. Haller. Disput. Chirurg., t. v. p. 460, fig.

<sup>5</sup> Saillant. Mémoire sur la maladie de la femme dite aux ongles. Paris, 8vo. 1776.

<sup>6</sup> Ephem. Nat. Cur., dec. 2, ann. i. p. 385.

<sup>7</sup> Musæus. Diss. de unguibus monstrosis. Hafniæ, 1716.

of a young woman, the nail of whose forefinger was situated on the side, not the back of the extremity of the digit. In another case, in which the fingers were wanting, the same anatomist found the nails implanted on the stump of the hand.<sup>8</sup>

1261. The nails are occasionally observed to become exposed towards their roots, as if the skin, which covers these parts, had shrunk upwards (*ficus unguium*). I have remarked this peculiarity among curriers. At other times, on the contrary, the cutis and cuticle extend a considerable way down upon the back of the nail, where they form a kind of tunic, which has been entitled *pterygium unguis*.

1262. The nails occasionally present certain peculiarities of shape: they are sometimes exceedingly arched or hooked (*ungues adunci*, Hippocrates), among the consumptive who have become very much emaciated. This remark has been reproduced by Duretus in his commentary upon Hippocrates ("Phthisicis unguis sunt more cujusdam serræ uncinati").

1263. When the matrices of the nails have been once diseased, their products occasionally present one or more longitudinal ridges, or grow in the shape of irregular cones. Those nails that have been divided and torn out after the mode of Dupuytren, occasionally continue long to overlap in the line of the division.

1264. Loder informs us that he has seen the nails become of a *chalky whiteness* in a person labouring under paralysis. All have observed the small white specks that often appear in the nails, which the ancients denominated *flores unguium*, to which Fallopius tells us the vulgar of his time gave the title of *lies* (*Mendacia*), as they do in France at the present day.

1265. Among convalescents from malignant fevers, Reil<sup>9</sup> has several times seen the nails become white. In icterus they occasionally become yellow; in subungueal ecchymoses they look black; in intermittent fever, in cyanosis, and under exposure to cold, they appear livid; in anasarca<sup>10</sup> they are of a pale white, &c.; but all these various tints are merely reflected through the nail, according to the varying colour of the matrix.

1266. To conclude this part of the subject, the nails are often observed stained of different colours by a variety of inorganic substances; they become brown when rubbed with nitrate of silver, black when impregnated with sulphuret of lead, sulphuret of mercury, &c.

1267. Tumours of various descriptions are occasionally developed in the structures that lie under the nails. Royer Collard speaks of a case in which the nail of the great toe was raised by a bony tumour, which had existed for several months, and grew from the last phalanx of the digit. I have met with the nails deformed and forced back from their bases towards their roots by warts evolved under part of the matrix near their free extremities: L. Lion, aged twenty, had a very voluminous wart on the extremity of the left forefinger; it consisted, in fact, of several confluent warts evolved under the extreme end of the nail, which was raised almost vertically. The wart was uneven, very hard and almost horny in its structure, of a grayish colour, and extended across almost the whole of the point of the finger, along the outer edge of the nail beyond its root. This compound wart was destroyed by the application of nitric acid. *Melanotic* tumours (§ 756) and vascular tumours, have also been seen evolved beneath the nails.

1268. Besides these various malformations, original or accidental, of the nails, their substance may be altered,—thickened, softened, hardened and eroded (*defœdatio*, *degeneratio*, *scabrities unguium*). These alterations, which are almost always the effect of chronic onychia, have also been observed among individuals affected with plica; some of them, appearing under these circumstances, have been figured by De Lafontaine.

The horny substance of the nails has been seen to undergo extensive changes, without the agency of outward and appreciable causes, as well as without any evident affection of their matrices. Black relates a case of this kind which is the more remarkable from the affection appearing to have been hereditary: "Est mihi amicus carissimus cui quum nonum ætatis annum ageret, in digito annulari manûs dextræ

<sup>8</sup> Hist. Anat. cent., ii. lib. 44, t. p. 240.

<sup>9</sup> Reil. Memorabil. Clinic. Fascic., iii. p. 206.

<sup>10</sup> Double. Signes séméiotiques fournis par les ongles. Journ. génér. de Médec., t. i. 33, p. 397.



unguis monstrosus, carvatus, rugosus, et asper excrevit, in quo usque ad hoc tempus nil morborum animadvertat; quam formam monstrosam unguem subisse ille narrat sine causâ internâ seu externâ morbosâ vel mechanicâ. Adfuit autem hæc deformitas jam in matre, et eodem temâ ætatis eademque lege, quam antea diximus, nempe ut simulacrum ad ætatis annum proventi essent, in sororibus et fratribus appareret." (*Op. cit.*, p. 9.)

1269. I have already said that a part at least of varying extent, of the nail, that is reproduced after an attack of chronic onychia, presented neither the semi-transparency nor the smooth and polished surface of the original nail. Under the agency of a very different cause, the action, namely, of dilute acids on the nails, they occasionally present a multitude of parallel lines on their surface, and are occasionally even resolved into a kind of brush.

1270. Several anatomists have been of opinion that the nails were formed by the superposition of a series of horny laminae. I have observed this structure of the nails in a man of the name of Meyer, seventy years of age, who came into the Hôpital de la Pitié, labouring under chronic inflammation of the bladder. The nails of this patient's fingers were thickened and composed of numerous superposed and softened horny laminae. The ends of the nails were worn away obliquely, or beveled off, so as distinctly to exhibit the different layers of which they consisted, and which were by so much the more extensive, as they lay more superficially. The surface of the nail of the left ring finger was uneven, that of the right corresponding digit was traversed longitudinally by an angular ridge.

1271. *Reproduction and accidental production of the nails.* When a nail is torn away by violence, or detached by the progress of diseased action in the subjacent integuments, it is slowly reproduced, and at length restored with more or less of the character of the original nail; but it is very seldom, indeed, that nails are observed to be developed upon those phalanges of the fingers or toes which are not usually or naturally provided with the peculiar vascular tissue that constitutes the ungual matrices. Tulpus appears to have met with this pathological condition: "Ungues, in digitorum apicibus semel deperditos, iterum renasci novum non est; sed raro id conspicitur fieri in secundo aut tertio articulo, prioribus amputatis, in quibus tamen non semel eosdem vidimus non secus progerminare debitamque acquirere formam ac si in digitorum consistentem apicibus, deponente nunquam sollicitudinem suam officios naturâ." M. Maréchal de Rougères,<sup>2</sup> Voigtel<sup>3</sup> and Ormancey<sup>4</sup> have since related instances of similar productions developed on the second phalange of a finger after the loss of the first: A woman had for several months laboured under an ulcer of the point of the middle finger of the right hand, in consequence of a whitlow which had occasioned the loss of the third phalange, and the whole of the distal articular surface and part of the compact bony structure of the second. On examining the sore, M. Ormancey saw a bony sequestrum which appeared to keep it open. This he extracted, and dressed the stump with saturnine cerate, until cicatrization was complete. Some months afterwards the patient returned to call on M. Ormancey, who now saw, not without astonishment, that the nail had been reproduced; instead of following the ordinary direction, however, it lay directly over the face of the stump, growing from the back towards the palmar aspect of the digit, as if to cover and protect the stump. M. Blandin<sup>5</sup> has met with a case of the same description; and a third occurred very recently at the Hôpital de la Charité, in the person of a woman who had lost the whole of the third phalange of one of the fore-fingers in consequence of whitlow. The soft and fleshy cushion which here covered the second phalange was terminated by a small, blackish nail, like a grain of *spur rye*. It is probable that the soft parts of the third phalange, and the ungual matrix especially, had not been wholly destroyed in these cases. Mr. Chevalier speaks of analogous cases in his Lectures.<sup>6</sup>

## GANGRENE OF THE SKIN.

1272. Gangrene of the skin may result from pustula maligna, from erysipelas of a severe kind, from frost bite, deep burns, the action of concentrated and strong alkaline solutions, compression, the ligature of the principal artery of an extremity, &c. It may also follow other gangrenous affections in different parts, as is occasionally seen in the gangrenous mouth of young children, and of the external parts of generation in little girls. It is likewise met with in the gangrene of the aged, and in cases of spontaneous gangrene with the formation of clots in the principal arterial trunks of the limb affected; lastly, external gangrene has been known to prevail epidemically.

Gangrene of the skin may, further, occur in the course of serious diseases of another nature. There was an old woman who died in the Hôpital de la Charité from the effects of a simultaneous affection of the lungs and intestines, added to erysipelas of the face and scalp, who, during the course of her illness, had an oblong gangrenous tumour developed on the sacral region, accompanied with vivid redness of the skin. Near this tumour a considerable number of very superficial eschars were seen, which looked at first sight like the crusts of a pustular eruption, but differed evidently from these in the smooth appearance of their surface, their dryness, their uniformity, and especially in the mode in which they were set or framed within the substance of the skin. Some of them were surrounded by a deep red blush, similar to that which bounds parts when stricken with gangrene; others began to be separated from the living tissues by a ring of suppuration. In endeavouring to detach them, their intimate connection with the tissues beneath was conspicuous. In other places the eschars were destroyed in their circumference, and were only visible in the form of a patch in the centre of a superficial ulcer. Lastly, in a great number of points, slight superficial excoriations were observed, without puffing of their edges, of a circular or somewhat indefinite shape, different in their appearance from ordinary ulcers, and in all respects similar to those which have already been indicated as consequences of the detachment of gangrenous eschars formed by the most superficial laminae of the skin.

Very shortly before this patient died, the whole of the eschars were separated; the edges of an incision which had been made through the principal gangrenous swelling over the sacrum, were loosened, very much swollen, red and painful. Shreds of grayish and mortified cellular tissue were seen at the bottom and around the edges of the wound, to which they adhered but slightly. On opening the body after death, the extent of the loosening around the edges of the great wound, was ascertained to amount to several inches. The sacrum was not denuded. The edges of the sore were flaccid and without redness. The cuticle had disappeared from its circumference, as if the skin had been long in maceration; and even where it still appeared, it could be detached to a considerable extent with great ease. A piece of the skin affected presented the following alterations: 1st, its surface was denuded of epidermis; 2d, two or three round bluish ecchymosed spots, the effect of leech bites, were perceived; 3d, the whole of this surface was pierced with very small holes. The regular arrangement of these holes, their slightly elliptical form, the possibility of penetrating into their interior with a pin, which entered a small oblique, and very superficial cavity, showed that they were formed by the orifices of the cutaneous follicles. 4th. The most superficial stratum of the skin was destroyed in a great many places, whence resulted excoriations of variable extent and depth. The smallest of these could only be distinguished with minute examination, or the aid of a magnifying glass, and might readily have been mistaken for the orifices of follicles, such as those I have mentioned; but they differed from these in resisting the entrance of the point of a pin into any cavity. They were very superficial; their bottom was almost on a level with their edge; in fact, they were only distinguished by their somewhat paler colour from the rest of the integuments. The excoriations, of middling size, were still less distinguishable. The appearance they presented might have been very accurately produced by shaving off the most superficial strata of the integument with a sharp instrument. Their edges were without tumefaction, or redness; their bottoms smooth; their colour very nearly that of the surrounding skin. A number of minute open-

<sup>1</sup> Tulpus. Obs. med., lib. iv. obs. 55. Amstelodami, 1641, 12mo.

<sup>2</sup> Journ. de Méd., t. xxvii. p. 177.

<sup>3</sup> Voigtel. Handbuch der Pathologischen Anatomie, 8vo. Halle, 1805.

<sup>4</sup> Journ. de Médecine, de Chirurgie, de Pharmacie, etc., p. 218, 8vo. Paris, Mars, 1809.

<sup>5</sup> Blandin. Anatomie Topographique, p. 558, 8vo. Paris.

<sup>6</sup> Chevalier (Th.). Lectures on the general structure of the human body, &c., 8vo. Lond., 1833, p. i. etc.



ings were visible on all, into which the point of a pin penetrated obliquely and gained the sebaceous follicles, whose orifices had been destroyed. The holes in these parts were consequently of larger size than the orifices mentioned a little ago, and instead of leading to the shut sacs of the follicles merely, permitted the pin to penetrate as far as the subcutaneous adipose tissue through the areolæ of the corion. The alteration resembling, as has been said, the surface which is produced by shaving away the corion horizontally, the areolæ were observed to increase in size, in proportion as the excoriation extended more deeply. Where this was the case not only did the openings on the surface lead directly down to the subjacent adipose tissue, but the head of a pin could even be passed through one of them. The subcutaneous cellular tissue in this point was inflamed, and the corion detached by the effusion of a little pus beneath it, which by pressure could be forced through many of the little openings that have been described.

### CICATRICES OF THE SKIN.

1273. Cicatrices of the skin are distinguished : 1st, into those which result from a particular modification undergone by the skin after certain inflammatory affections; 2d, into those which consist of a tissue of new or recent formation, bearing a closer or more remote resemblance to the portion of the skin which it replaces.

1274. Among the first order of cicatrices there are some, a knowledge of which is important, inasmuch as they are characteristic of the affection which has produced them, such as those of vaccinia, of lupus *non exedens*, those also that are occasioned by the action of tartar of antimony, the bites of leeches, ulcerated blisters, superficial burns, &c. The whole of these cicatrices have many features in common; their colour is in general of a duller white than that of the healthy skin which surrounds them, and their surface appears to be beset with a great number of minute depressions, which in many cases exhibit pretty closely the areolar structure of the corion. These cicatrices occasionally present particular appearances: the cicatrices of blisters and of variola, for instance, are often seen covered with excrescences; when they occur on parts that are covered with hair, this appendage is generally white or colourless. I have seen a large cicatrice covered with small reddish tumours similar to the cheloid formation in its earliest stages. Some of these cicatrices do not rise above the level of the skin; they are even in many cases rather below it (the cicatrices of *cow-pox*), in others they are elevated (leech bites, the cicatrices of *acne*, &c.). I have observed the cicatrices that follow the action of the tartar emetic ointment on the skin, presenting this prominence in a very remarkable manner: there was a man under my charge in the Hôpital de la Charité almost the whole of the skin of whose abdomen was covered with prominences of a dull white colour, slightly wrinkled and nearly of the size of sixpences, which at first sight bore no inconsiderable resemblance to some peculiar species of tubercular eruption.

1275. When a portion of the integuments and even of the subjacent parts has been destroyed by a wound, by sloughing or ulceration, a new integument is often produced which resembles, or at least is analogous to that which has been destroyed, and is always the same in its whole extent, whatever the diversity of parts that are to be covered (*second species of cicatrice*). After the primary symptoms, which vary with the nature of the cause giving rise to them, have subsided, a series of secondary phenomena commence, the nature and succession of which are constantly the same. These are, 1st, the production of a layer of coagulable lymph, similar to that by which simple solutions of continuity are repaired; 2d, the formation of granulations and the secretion of pus; and 3d, the cessation of this purulent secretion and the formation of a cicatrice. The layer of coagulable lymph, similar to that which constitutes false membranes, inorganic, at first, but soon organized, becomes covered with small conical, red, fleshy elevations, and then constitutes the granulating membrane. This membrane is cellular, vascular, very contractile, and extremely apt to

disappear and to be reproduced; by and by it is covered with a distinct cuticle, and acquires the appearance of the skin.

The corion of cicatrices, extremely thin and flimsy at first, more vascular and consequently redder than the normal membrane, becomes by slow degrees whiter, denser, and harder than this last. It also assumes a smooth and shining appearance, very probably depending on the absence of papillæ and of piliferous bulbs, as well as from its tension and intimate adherence to the subcutaneous cellular tissue. The epidermis and rete-mucosum are reproduced gradually: the layers first formed are readily detached from the surface of the dermis; if the pigmentary matter is deposited at all, it is always at a later period. Bichat, indeed, maintained that this structure was never reproduced, and that cicatrices were alike colourless among all the races of mankind; but this position is untenable, and the cicatrices that follow solutions of continuity in the negro are often as black as the rest of the skin.<sup>1</sup>

1276. The corion of completely formed cicatrices is less elastic, and adheres more intimately to the subjacent cellular tissue than the tissue it replaces; in fact it is continuous or forms one with the cellular tissue from which no art can separate it. It is not so tough as the natural corion; even old cicatrices of the lower extremities are readily and frequently torn.

There are some cicatrices which, in point of conformation and structure, partake of the nature of those both of the first and second species; such are those that result from confluent variola in some cases, from simple rupia, from certain syphilitic eruptions, and frequently from burns.

1277. The situation, extent, form and depth of cicatrices often indicate in some sort the nature of the affections that have preceded and occasioned them: such are the cicatrices of variola, vaccinia, zona, the serpiginous syphilide, lupus, &c.

1278. When a cicatrice is very irregular, when it interferes with the motions of the muscles or articulations over which it lies, we have scarcely any efficient remedy for the evils it induces, but a surgical operation, analogous to that which Celsus<sup>2</sup> recommends and describes in a remarkable passage, and which Fabricius Hildanus,<sup>3</sup> Dutertre,<sup>4</sup> H. Earle,<sup>5</sup> and Dupuytren have all performed with success.

The effects of great distension of the skin ought to be distinguished from cicatrices. When, for instance, the mammæ have been excessively distended during the period of nursing, and after women have suckled several children, the skin covering them is intersected with irregular lines, and wrinkled angular spaces of a brighter white than the rest of the integuments. These, as I have satisfied myself by dissection, are owing to a separation and deformity of the tissue of the corion, become thinner and less transparent. Individuals who are extremely corpulent, who are, or have been affected with ascites, and women who have had families, have the skin of the abdomen seamed with these white lines, which run in all directions, but especially transversely; these constitute, the *Vitiligo obesorum*, the *Vit. hydro-picorum*, and the *Vit. gravidarum*, of Frank.

1279. To bring this portion of my subject to an end, I shall only farther speak of certain anomalies in the structure of the corion, which are observed very rarely.

In the interior of the body, *cutaneous productions*<sup>6</sup> are sometimes, through with extreme rarity, encountered. These adventitious tissues, which are generally met with in the ovaries, have been ascribed to foetal abortions.

*Congenital deficiency of the skin to a greater or less extent over*

<sup>1</sup> Marx. Sur le pigmentum de la peau des nègres. (Bull. des sc. méd. de Férus-sac, t. xvii. p. 328.)

<sup>2</sup> At si digiti vel in utero protinus, vel propter communem exulcerationem postea cohaserunt, scalpello diducuntur dein separatim uterque non pingui emplastro circumdatur; atque ita per se uterque nascitur. Si vero fuit ulcus in digito, etc. (Celsus. De re medicâ, lib. vii. sect. 22.)

<sup>3</sup> Fabric. Hild. (Gul.). Cent. i. obs. 83.

<sup>4</sup> Dutertre (P.). Réflexions et observations sur les plaies en général, 4to. Paris, 1805.

<sup>5</sup> Earle. On contractions after burns or extensive ulcerations. (Med. Chir. Transact., tom. v. p. 96.)

<sup>6</sup> Bricheteau. Observ. de kystes dermoïdes et pileux, suivies de quelques remarques sur les productions organiques (Journ. complém. des Scienc. Médic., t. xv. p. 298.)



various regions only occurs in those cases in which the splanchnic cavities are not completely closed. The epidermis has been found primarily defective among new-born infants.

The skin has occasionally been known to undergo a remarkable extension in adults and the aged: Mr. Chevalier<sup>1</sup> mentions a case in which the skin of the breast and left side of the trunk generally was so loose that it could be folded or wrapped round a considerable portion of the body. Under the name of *Dermatylotie*, M. Alibert relates a considerable number of cases of this elongation of the skin of the face, eyebrows, neck and abdomen. The most interesting is that of a peasant of Gisors, whose head was of extraordinary magnitude, owing to the large folds of integument with which it was enveloped. The skin of the left eyelid was two inches in length, and fell down over the cheek. The edge of the upper eyelid projected like the mouth of a carp; the ear was dragged downwards; the parts covered with hair were beset with a stronger growth than usual. The united weight of these folds of the skin formed an uneven mass which dragged down the integuments covering the upper part and sides of the head.

The same author details another case in which the upper eyelids were the parts especially affected. They were so much elongated that they fell down over the eyes and the whole of the cheeks. Another case was that of a man, sixty-two years of age, the skin of whose neck, singularly lax and furrowed, formed a kind of triangle which fell over the front of the chest, and bore a very strong resemblance to the dew-lap of the ox, or the loose folds of skin that depend from the throat of some large species of mastiff. The face of this man was ploughed with longitudinal furrows which united together in the chin.

#### PARALLEL BETWEEN THE DISEASES OF THE SKIN AND THOSE OF THE MUCOUS MEMBRANES.

1280. Studied under the twofold point of view of conformation and structure, the tegumentary membranes of the outer surface, and of the inner passages of the body, have characters which are common almost in their whole extent. In both particulars, however, they present modifications that are sufficiently striking, according to the regions or variety of parts they cover. These features of resemblance, and these differences, explain the fact of the skin and mucous membranes presenting a great number of analogous and common alterations, and a certain number of others which are peculiar to each. The importance of the comparative study of these affections has been felt; but few physicians and pathological anatomists have hitherto given their minds to inquiries of this description.

The observations of Hébréard<sup>2</sup> have shown that the skin may become changed into a mucous membrane, and this, in its turn, into external integument, under certain circumstances. In fact, when any portion of the outer surface of the body is for a long time subtracted from the influence of the atmosphere, as during the treatment of certain fractures, when the leg is kept for many weeks bent upon the thigh, and the integuments of the femoral and crural portions of the popliteal region are maintained in contact, and in the folds of the skin of very lusty infants, we see that the cuticle softens and disappears, and that the surface of the cutis ends by secreting mucus exactly like a mucous membrane. On the other hand, we know that in old cases of prolapsus of the uterus, and of the anus, the mucous membranes of the vagina and intestines become thickened and dry, and by degrees acquire every appearance of the skin.

To the first sketch of Hébréard quoted, succeeded the more extensive work of J. B. Wilbrand,<sup>3</sup> who, after a careful study of the tegu-

mentary system of every region, proceeds to show that a certain number of alterations and affections are common to the two grand divisions of the general involucrum of the body. (a)

1281. The study of *inflammation* and of its products or effects, embraces so many the more objects, as the elementary tissues of the organ which is affected are more numerous and varied. It is therefore easy to perceive beforehand that the affections of the external integument or skin, the organization of which is so much more complex than that of the mucous membranes, will exhibit a greater number of morbid modifications than these latter structures; that among the mucous membranes, those of the mouth, pharynx and œsophagus, provided as they are with an epithelium, or cuticle, will present lesions more varied in their appearances than those of the stomach and intestines, which themselves may be expected to offer a greater number than the serous membranes, the organization of which is still more simple. (b)

1282. The greater number of the exanthematous inflammations, measles, scarlatina, urticaria, &c., attack both divisions of the tegumentary membranes simultaneously. The running of the eyes, the nasal, laryngeal and tracheal catarrhal affection of measles correspond to the exanthema of the skin, which characterizes the disease on the general surface, and the matter secreted by the bronchi presents a peculiar character in relation with the species of inflammation which is going on. In scarlatina the mucous membrane of the mouth and pharynx almost always, and that of the stomach and intestines occasionally, presents a dotted redness altogether analogous to that which is observed upon the surface of the skin. The eruption in this disease is followed by desquamation of the cuticle, and the mucous membranes furnished with an epithelium, cast this pellicle off in a precisely similar manner.

On the surface of the mucous membranes we also observe red patches, or efflorescences, which must be held as of the same nature with erythema, and probably, also, roseola of the skin. I have repeatedly seen red patches upon the lips and conjunctivæ, in cases of *erythema marginatum*; and I have known this affection complicated with pulmonary catarrh. The mucous membrane of the intestinal canal occasionally, also, presents circumscribed red patches, distinct from clusters of inflamed mucous crypts, and formed by the membrane itself, injected and thickened, and generally covered with a ropy red viscid mucus. On this membrane, too, we frequently encounter bands, and diffuse red suffusions, analogous to certain varieties of erythema occurring in the skin.

The submucous cellular tissue of the intestinal canal differs so essentially from the subcutaneous cellular membrane, that it is not difficult to assign a reason for our never meeting with inflammation in this situation, which we can approximate rigorously to erysipelas.

The skin, in a state of inflammation, never presents the *vascular ramifications* we observe on the surface of the mucous membranes in this condition.<sup>4</sup> This is owing to a remarkable difference in the mode of distribution of the submucous and subcutaneous vessels, and to the

(a) See *anté*, pp. 46–7, some observations on this point by the American editor.

(b) It is now asserted that all the mucous surfaces are lined with epithelium, either of a cylindrical or tessellated arrangement, and that it is formed, developed and detached in the same manner as the epidermis. See Mandl, *Manuel d'Anatomie Générale*, p. 543. As the epidermis is renewed some days after birth, and from time to time afterwards, so, likewise, is the intestinal epithelium often detached in long hollow or tubular pieces, like the fingers of a glove, and at all times it is freely given off and carried downwards by aliments and secreted fluids.

d'Anatomie générale, descriptive et Pathologique, trad. de l'allemand, avec des notes, par Jourdan et Breschet. Paris, 1825, 3 vol. 8vo.), have laid the foundation for this comparative study. Messrs. Roche and Sansen have also presented general considerations of great interest on the Pathological Anatomy and Physiology of the mucous and cutaneous systems in their *Nouv. Eléments de Pathologie Medico-Chirurgicale*, 4 vols., 8vo. Paris, 1827.

<sup>4</sup> Billard has made a particular study of the alterations of the mucous membrane of the intestinal canal. His observations have served me as points of comparison in contrasting the various diseases of this tissue with the affections of the skin,—vide Billard (C.). De la membrane muqueuse gastro-intestinale dans l'état sain et dans l'état inflammatoire, etc., 8vo. Paris, 1826.

<sup>1</sup> Chevalier. Lectures on the general structure of the human body, etc., 8vo. London, 1823.

<sup>2</sup> Hébréard. Mémoire sur l'Analogie qui existe entre les systèmes muqueux et dermoïde (Mémoires de la Société Médicale d'émulation, t. viii. p. 153).

<sup>3</sup> Wilbrand (M. J. B.) (Das Hautsystem in allen seinen Verzweigungen, Anatomisch. Physiol. und Patholog. dargestellt. Giessen, 1813), J. F. Meckel (Manuel



dissimilar thickness of the skin and of the mucous membranes. The ramified vascular injections observed on the nose and cheeks, are generally to be regarded as an anomalous, non-inflammatory development of the vessels of these parts. The capillary injection of the skin, like that of the mucous membranes, is, in one instance, the consequence of inflammation, and, at another, of mere passive congestion, supervening after death; these two species of redness of skin cannot be distinguished, like those of the mucous membranes, by the state of the vessels in their vicinity.

In fine, if we except the white wheals of urticaria, and the patches of roseola, we find in the mucous membranes almost the whole of the varieties, in form and appearance, presented by the exanthematous inflammations of the skin. The internal exanthemata, however, are not accompanied with any desquamation corresponding to that which is observed on the exterior of the body, except in those regions—the mouth, pharynx, and œsophagus, in which the mucous membranes are furnished with an epithelium. In the stomach, intestines, trachea, &c., the loss of the epidermis is represented by a modification in the secretion of the mucus which covers their surface.

As to the brown, gray, or slate-like discolorations presented by the mucous membranes, in consequence of their inflammation, we observe very similar tints following chronic inflammatory affections of the skin.

1283. Affections analogous to the *bullous* inflammations of the skin, are observed in those mucous membranes that are provided with an epithelium. Large, prominent bullæ, indeed, are never observed on these parts; in the mouth they are always flattened. The serum, as it is formed, seems to permeate the epithelium, which becomes of a dull white colour. No bullæ are ever discovered in the stomach and intestines of those who have died whilst labouring under pemphigus. They cannot even be excited there by artificial means: Bichat applied a piece of blistering plaster to the mucous membrane of the intestine in a living dog; the effect of this was to produce a circular patch of inflammation, but no blister. It would be absurd to denominate as bullæ those collections of pus or serum occasionally met with in the submucous tissues, which ought to be assimilated to subcutaneous abscesses or infiltrations.

1284. It is familiarly known that on opening a blister produced by the action of epispastics upon the skin, a membraniform concretion is frequently observed. This, like the pseudo-membranous formations of the serous tissues is principally composed of fibrin. Blistered surfaces, too, occasionally become covered with a true membraniform pellicle. If this be removed the papillary surface becomes extremely red, and the network of vessels, loaded with blood, which traverse it in all directions, are observed to pour out a fluid which adheres to the inflamed surface and gradually concretes into a new pellicle, thin and transparent at first, but which soon acquires greater thickness and opacity. Oil impregnated with the active principle of cantharides, applied to the tongue and lips, produces an effect very similar to what it does when rubbed on the skin; yet the alteration bears greater outward resemblance to an inflammation with pseudo-membranous deposit, than to bullous inflammation. And there is, in fact, a pseudo-membranous pellicle deposited under the raised epithelium,<sup>1</sup> which, thin and semi-transparent at first, becomes, before long, thicker and more opaque, being in all respects very similar to the ordinary false membranes of blistered surfaces. It appears, therefore, that the stimulus which, applied to the skin, produces a bulla, with or without a sub-epidermic false membrane, when applied to the mucous membrane of the mouth, occasions a fibrous concretion under the epithelium, and when applied to the intestine, is followed by simple redness and inflammation. This diversity of effect, according to the part interested, is also observed among new-born infants affected with thrush, in whom pseudo-membranous deposits, sometimes apparent on the hands, are extremely distinct in the mouth, pharynx, and œsophagus, but have never been observed in the stomach and bowels.

The pseudo-membranous concretions produced upon the mucous membranes by the action of cantharides, although presenting the anatomical characters of those of diphtheritis, differ from these in one

essential feature peculiar to this disease, namely, in not being contagious, as diphtheritis unquestionably is. It would appear, also, from what Messrs. Bretonneau, S. Bard, and Trousseau say, that besides the false membranes of various forms and dimensions which are observed in the course of many bullous, vascular, and pustular inflammations, the skin may be primarily affected in some rare cases with inflammation, accompanied with the elimination of false membranes of the same nature as those of diphtheritis.<sup>2</sup>

In the course of the year 1814, I observed the blisters of a great number of patients in the Hotel Dieu, become covered with a thin membraniform fibrinous deposit, adherent to the papillæ, and precisely similar to that which I perceived at the same period upon the wounds and ulcers attacked with hospital gangrene. There seems to be some analogy between angina with formation of false membranes, and hospital gangrene occurring in inflamed skin: besides the similarity of their anatomical characters, both of these forms of inflammation are contagious.

1285. True *vesicles* are never seen, save on the mucous membranes that are covered with epithelium.<sup>3</sup> The lips are often attacked with herpes, and zona may extend to the inside of the mouth. The aphthæ that occur in the cavity of the mouth and on the surface of the pharynx, appear to be analogous to one or other of the varieties of herpes. I have met with eczema confined to the mucous membrane of the lips and extending into the inside of the mouth. It also occasionally appears confined to the mucous surfaces of the nipple, of the penis vulva, and verge of the anus. I have observed chronic and very rebellious coryzæ accompanied with discharge from the nostrils, and very considerable pruritus of the nasal fossæ, which were preceded by eczematous affections.

Mercurial stomatitis and angina are analogous to the affection of the skin which is described under the name of *hydrargyria*; the whitish patches of the mouth and pharynx that then occur, and that are often regarded as fibrous and pseudo-membranous, are principally formed by the epithelium, thickened and detached from the membrane beneath it. We never observe any affection of the mucous membranes that can be compared to scabies.

1286. *Pustular* inflammations have never been observed on the mucous membranes with the form and characters which they present on the skin, except on those that are furnished with an epithelium. When the cause producing the pustules has extended its influence to those parts of the mucous membranes that have no epithelium, the form of the inflammation is necessarily modified. Variola, for instance, which appears with the characters of a truly pustular eruption on the mucous membrane of the lip, inside of the mouth and pharynx, as well as on the skin, gradually loses its strong features as it appears on parts more remote from the surface of the body. In the trachea the pustules are replaced by small white circular patches of the dimensions of variolous pustules, but formed by a simple deposit of pseudo-membranous matter. In the stomach, and along the course of the bowels, nothing more is apparent, even at the height of the disease, than red, circular spots, which seen alone, would hardly recall variolous pustules to the mind.

Impetigo occasionally attacks the mucous membrane of the angles and of the interior of the mouth, as well as of that which lines the nasal fossæ. In the chronic coryzæ which often accompany impetigo of the alæ nasi, the nasal fossæ pour out a thick matter which concretes in the shape of crusts. When impetigo extends into the mouth, white and pustular-looking points are perceived in its interior. The inflammation of the follicles of the edges of the eyelids or of the hairy scalp, which frequently coincides with, or follows attacks of impetigo, is a disease analogous in its nature to this last affection.

The typhoid follicular eruptions (*taches typhoïdes lenticulaires*) and gangrenes of the skin occasionally observed, must be assimilated to the follicular eruptions and gangrenous patches that occur in the course of the intestinal canal in dothineritis.

The corion or dermis of the mucous membrane does not present,

<sup>2</sup> Lélou, études anatomiques sur l'épithélium 4to. Paris, 1827.

<sup>3</sup> When ulcers appear behind the ears, says S. Bard, or on different other parts of the body, they require peculiar treatment. The discharge ought to be encouraged by the frequent use of tepid milk and water fomentations; unctuous applications of all kinds are prejudicial, for they tend to suppress the secretion (Bretonneau, op. cit., p. 483).

<sup>1</sup> Bretonneau. Des inflammations spéciales du tissu muqueux, etc., 8vo. Paris, 1826, p. 356.



like that of the outer integument, a regular areolar or cellular tissue; it is rather spongy and fungous, and does not consequently present any alteration analogous to the *furuncular* affections of the skin. Neither has it been known to suppurate after the manner of the skin in the following case: I had directed the application of a large mustard poultice to the side of a young man, labouring under pleurisy, and who died from effusion into the cavity of the chest. Next day, and the day after that, the skin presented a red colour, similar to what it has in scarlatina; but on the third day, the irritated skin was perceived to have assumed a dull white or milky hue. The epidermis could be raised and detached with a pin, and the sensibility of the outer layer of the corion appeared to be blunted. The patient having died, the milky-white colour of the integument was ascertained to be occasioned by an infiltration of pus, with which the corion seemed to be impregnated. By squeezing the skin between the fingers, the pus could be forced by an infinity of small orifices from its surface, and flowed in a continuous current when one or two incisions were made into its substance.

1287. In *prurigo pudendi*, and *prurigo præputii*, it very rarely happens that true papulæ can be detected on the mucous membranes of the vagina and prepuce; they are almost always to be detected in the neighbourhood, on the pubes, scrotum, labia majora, &c.

1288. *Tubercular* inflammations have, on the contrary, been seen pretty frequently attacking the mucous membranes. Primary cancer of the velum palati, for instance, begins in the development of tubercles analogous to those observed on the skin. Cancerous tubercles of the cheek are occasionally observed at the same time that tubercles of the same nature exist on the velum palati and palatine arch; circular hypertrophied patches, and cancerous tubercles of the skin are also met with in those individuals who are affected with scirrhus of the mucous membrane of the stomach. The tubercles of Greek elephantiasis are evolved, not only on the exterior of the body, but very commonly also on the palatine arch and the nasal fossæ. Lupus is well known occasionally to commence in the interior of the nose.

1289. *Lepra* and *psoriasis* perhaps never implicate the mucous membranes; but *pityriasis* sometimes shows itself upon the lips. Were affections of the nature of any of these developed on the mucous membranes unprovided with epithelium, their appearance would necessarily be entirely changed.

1290. Several forms of *gangrenous* inflammation observed on the skin, may also appear on the mucous membranes; malignant pustule has, for example, been seen on the tongue;<sup>1</sup> and whilst it is evolved externally, the stomach and different other internal viscera may be simultaneously attacked (Case XCVI). Gangrene is occasionally, though rarely, observed attacking the ileum and cæcum as well as the skin, in typhus fever.

1291. The *multiform* inflammations are simplified in their forms when they occur on the mucous membranes. Still burns appear with the erythematous, bullous and gangrenous characters in the mouth and œsophagus.

It is certain that almost all the forms under which syphilis appears upon the skin, occur on the mucous membranes provided with an epithelium. Syphilitic exanthemata, pustules, tubercles, ulcers and excrescences have all been seen on the mucous membrane of the mouth, of the nipple, labia majora, glans penis, &c. Several forms of venereal inflammation have also been observed on the conjunctiva, in the interior of the nasal fossæ, of the mouth, pharynx, larynx, rectum, &c.; it is a very general opinion, however, that the œsophagus, stomach, intestinal canal and bladder are never the seat of syphilitic affections. Some have even gone further, and have said that since the irregular grayish ulcers, with peculiar characters, encountered in the intestinal canal, which they have even eroded in different directions, are not to be considered as syphilitic in their nature, neither are the ulcers of the skin which present corresponding characters, to be regarded as truly syphilitic. For my own part, I hold the characters of all the different forms of syphilitic eruption to be so definite and decided, that I am of opinion those ulcers of the intestines, which, in their external characters, approximate those of the skin, require to be examined with greater care and attention than have yet been bestowed upon them before any conclusion of the kind above indicated, can be come to.

<sup>1</sup> Lond. Med. Gaz., June, 1834.

1292. *Ulcers* and *perforations* of the mucous membranes, especially of the intestines, like those of the skin, follow inflammations of various kinds, abscesses of the subjacent cellular tissue and gangrene. *Softening* (*ramollissement*), rather rare in the skin, the corion of which is substantial and tough, is much more common in the mucous membranes.

1293. From this hasty sketch of the diseases of the internal and external integument of the body, it is easy to perceive that they bear a great analogy to one another. The epithelium, like the epidermis, is altered under the influence of inflammation, and the mucus which they both pour out under peculiar circumstances, is modified like these, in the points where it is secreted in their stead; the vascular rete of both becomes injected, and the corion thickened; the villi of the mucous membranes increase, and the papillæ of the skin are extended: the follicles of both integuments often enlarge, and accidental morbid secretions take place from the one as from the other. In a word, if the whole of the forms of phlegmasiæ observed in the skin, are not encountered in the mucous membranes, and several of them are modified in their outward appearance, it is entirely owing to the differences of structure presented by these two tissues, which are amply sufficient to account for every discrepancy observed in their morbid phenomena.

1294. *Congestion* and *hemorrhage* frequently take place into and from the external and internal integument simultaneously. In certain kinds of death, from apoplexy, strangulation, &c., the skin and mucous membranes alike present livid blotches on their surface, and occasionally spots of ecchymosis. The blue colour of cyanosis appears on the skin and mucous membrane of the lips, mouth, and stomach at the same time. Purpuræ, ecchymoses and petechiæ occur on the interior as well as the exterior covering. As to the material differences observed between the hemorrhages that take place from the mucous membranes and the skin, these are due, in very great part at least, to difference of structure. The vascular rete of the surface of the cutis vera or corion, is less developed than that of the mucous membranes; these, when covered with epithelium, have this membrane much thinner than the cuticle, and in many places are entirely without any tissue of the kind, circumstances which we may presume favourable to the flow of blood from their surface; whilst opposite conditions rather determine the deposit of this fluid under the form of petechiæ and ecchymoses, in the substance of the skin. The absence of epithelium on the membrane lining the nasal fossæ explains the greater frequency of epistaxis than of bleeding from the mouth.

1295. The *neuroses* of the skin, like those of the mucous membranes, ought to be made the subject of new inquiries; the effects of injury to, or alteration of, the subcutaneous nerves, are much better known than those of lesion of the submucous nerves.

1296. The absence of pigment in the mucous membranes of the human body explains why we do not find in these membranes any alteration which can be assimilated to leucopathia of the skin; for the morbid paleness of the mucous membrane of the intestines, almost always connected with a diminution of its thickness, is of a totally different nature, and appears to be generally consequent on inflammation.

Individuals affected with general nigritics do not generally present any corresponding alteration in the mucous membranes, although I have seen it extend in the form of brownish spots to the surface of the tongue.

The mucous membrane of the intestines has been several times observed discoloured black, particularly by Morgagni. Andral<sup>2</sup> has also seen the surface of the large intestines of a deep black colour, inhering in the mucous membrane, which had in other respects preserved its usual thickness, the mucous crypts only being particularly enlarged. The colouring matter came off and blackened a piece of linc with which the surface of the membrane was wiped; the colour was, in the judgment of M. Andral, perfectly distinct from the brown hue presented by the same surfaces when affected with chronic phlegmasiæ; he regarded it as the effect of an accidental secretion and deposition of colouring matter, similar to that which takes place naturally in the tunica choroidea of the eye. I have several times

<sup>2</sup> Revue médicale française et étrangère, t. ii. p. 148.



observed the surface of the tongue dotted with a bluish black. Ephelis, lentigo and chloasma have no counterparts on the internal mucous membranes, although these last, and especially those of the glans and vulva, occasionally exhibit accidental discolorations. They are tinted yellow, but in a less degree than the skin in icterus, and like this, they acquire a leaden or slate colour under the long-continued internal use of the nitrate of silver. I have, further, observed vascular nævi penetrating into the interior of the mouth.

1297. Under the title of *hypertrophy from an inflammatory cause*, indurated thickenings of the mucous membranes coincident with other inflammatory lesions, have been designated. With these we must assimilate those thickenings and indurations of the skin, which are observed along with psoriasis and lichen of long standing, with tubercular inflammations, &c. The title of *hypertrophy*, however, ought to be reserved for the indication of cases of simple *exaggeration* of the normal tissues of the skin. Such, with reference to the mucous membranes, are certain anomalous developments of their tissues generally, and of their villi and follicles particularly, which are sometimes encountered,—alterations, the counterparts of which are observed in the skin in cases of ichthyosis and elephantiasis arabica. Billard quotes several cases to show that the mucous glands of the intestines may acquire an anomalous magnitude independently of inflammation. The skin is also occasionally observed to be covered with a greater number of follicles than it exhibits in the usual state. I have seen this excessive development of the follicles, especially among individuals of mature years, and the aged, in the skin of the neck, on the sternal, on the scapular regions, and sometimes even over the whole surface of the body.

1298. The *submucous*, like the subcutaneous cellular membrane, may be the seat of œdema, ecchymosis, and abscess; but the development of tubercular matter, which takes place rather commonly in the submucous, occurs very seldom in the subcutaneous cellular tissue. The case is otherwise with regard to scirrhus, cancer, and melanosis, which occur with no less frequency in and under the skin than in and below the mucous membranes. A multitude of other alterations are common to the two integuments. Excrescences of the glans penis and female vulva correspond to warts developed on other parts. The diverticula of the intestinal canal even bear some analogy to the digitiform appendages of the skin; the mucous membranes are occasionally beset with accidental hairs like the skin; in the subcutaneous cellular tissue cysts are sometimes observed analogous to those occasionally discovered in the submucous cellular membrane; the peculiar tumours described by Dagorn and Tilesius, covered with the skin, may be regarded, in point of conformation at least, as analogous to certain polypi evolved below the mucous membrane, &c. The rudiments, of various rare affections of the corion and cuticle, are even to be traced in the mucous membranes. I have dissected the tongue in several cases, in which the papillary system, very highly developed, was covered with an epithelium whose thickness, the double or triple of what it is generally, brought forcibly to mind the appearance of the epidermis in certain cases of elephantiasis arabica, and of local ichthyosis. I once saw a child, eight years of age, the skin of whose axillæ, bends of the arms, popliteal regions, and anterior part of the neck, presented so considerable a development of the papillæ that the whole of these parts appeared to be covered with a

continuous crop of warts, almost as moist on their surface as the mucous membranes themselves. The skin of the abdomen was brown and rugous, as it is in certain cases of ichthyosis. Circumscribed hardnesses and horny appendages, similar to those pretty frequently met with on the skin, have also been seen developed on the mucous membranes.

With regard to the accidental ossifications of the integuments, it does not seem to me that any conclusion can be drawn from the imperfect case recorded by Gillaiseau (Bullet. de la Faculté de Méd. de Paris, t. i. p. 224), and several others still less decisive.

1299. The study of the *cicatrices* of the external integument is fraught with a greater degree of interest than that of the cicatrices of the mucous membranes. Cicatrices of these latter tissues acquire more speedily the appearance of the membranes themselves, and on that account, remain for a shorter while visible than those of the skin. They are also, like the primary tissue they represent, less complex than those of the external integument. In the skin, the epidermis and dermis are, of all the elements, those which are most speedily reproduced. The pigment is never deposited till a much later period, and the sebaceous follicles and piliferous bulbs are scarcely ever reproduced at all.

Several cicatrices of the skin, such as those of burns, of serpiginous syphilis, lupus, acne, and leech bites, present peculiar characters, familiarity with which completes the knowledge of the causes that produce them.

Various animals are occasionally developed on the surface of the skin of man, and on that of the internal integument also. The difference of the places they frequent is in accordance with the no less remarkable differences they exhibit in their organization.

1300. The teeth are the only dependences of the mucous membranes which it is possible to assimilate to the hairy appendages of the skin. Like the hair, the teeth, as it is well known, may be faultily formed in a greater or less degree, and run in a variety of directions other than those they follow in the normal state. The alteration of the dental pulp seems to correspond to that of the piliferous papilla, and the fall of the teeth in the aged is a phenomenon of the same description as senile alopecia.

1301. To conclude this subject: when the body begins to putrefy, the external and internal integuments present livid marks, which correspond to the larger veins of the subcutaneous and submucous tissues. It is often of importance not to confound this appearance with that occasioned by congestion or inflammation. The subcutaneous cellular tissue more frequently becomes emphysematous in the earlier stages of putrefaction, than that which is distributed under the mucous membranes; and there is one alteration exhibited by the skin, as the body is hastening to decay, nothing analogous to which is seen on the mucous membranes; this is a kind of blebs or blisters of different sizes, which are formed by a quantity of sanguinolent serum, frequently mixed with a few bubbles of air, effused under the epidermis. In the point upon which these phlyctenæ are formed, the corion has sometimes a greenish look; the epidermis is always readily detached from the part near these phlyctenæ; these two circumstances will always suffice to distinguish the alteration in question from the blisters occasioned by burns, frost bite, pemphigus, œdema, and the action of cantharides.



## APPENDIX.

1302. In this appendix I shall describe, first, the organized living creatures which are observed on the surface of the skin, in its substance, or in the subcutaneous cellular tissue; secondly, Arabian elephantiasis, a disease in which the skin is not at first implicated, which ends in causing the hypertrophy of its different component layers; thirdly, diseases peculiar to certain countries, or to certain epochs, several of which have been very imperfectly described; fourthly and lastly, certain diseases of animals which are capable of being transmitted to man.

### ORGANIZED LIVING CREATURES INHABITING THE BODY OF MAN. (a)

1303. Many animals may be developed, or may exist accidentally on the skin of the human subject. Some grow, live, and generate

(a) Notice has been taken already (in note at pp. 196-7) of *vegetable* organized matter, growing on the human skin in certain diseases, and more especially in favus. As the subject is a novel one, it may not be deemed amiss to introduce here the substance of Dr. John Hughes Bennett's observations, confirmatory of those of Mr. Gruby.—“On the Parasitic Vegetable Structures found growing in living animals. In Transactions of the Royal Society of Edinburgh.”

“In the *Comptes Rendus des Séances de l'Académie des Sciences*, for July and August, 1841, M. Gruby has inserted some observations regarding the crusts of *tinea favosa*, or *porrigo lupinosa* according to Bateman, for the purpose of establishing a more complete diagnosis of this disease than had previously existed. For this purpose, he had recourse to the microscope. By means of this instrument he ascertained—1st, that *tinea* consists in the aggregation of millions of mycodermatous plants. These are formed of articulated filaments of a diameter from  $\frac{1}{1000}$  to  $\frac{1}{500}$  of a millimetre; they spring from an amorphous mass of which the periphery of each capsule of *tinea* is composed, and give off towards its centre oblong or round homogeneous corpuscles, which are the reproductive spores. The longitudinal diameter of these corpuscles is from  $\frac{1}{300}$  to  $\frac{1}{100}$  of a millimetre, and the transverse is from  $\frac{1}{300}$  to  $\frac{1}{150}$ . The cells of the tubes sometimes contain small round transparent molecules, of a diameter varying from  $\frac{1}{1000}$  to  $\frac{1}{500}$  of a millimetre. The seat of these vegetations he ascertained to be in the cells of the epidermis. The true skin is compressed, not destroyed; and the bulbs and roots of the hairs are only secondarily affected. The disc of the capsule, which is not at the commencement perforated, opens by a small hole in the centre. This enlarges, and the plants push through it, so that, at a more advanced period, instead of there being a central depression in the capsule, there is a convexity, and its edges disappear. M. Gruby inoculated 30 phanerogamous plants, 24 silkworms, 6 reptiles, 4 birds, and 8 mammifera, but only induced the disease once, and then in a plant. The human arm was inoculated five times, but, inde-

pendent of a slight inflammation and suppuration, no effect was produced. Dr. Bennet some time after examined the crusts on the head of a boy who laboured under the disease, and immediately detected the cylindrical and ramified appearances described by M. Gruby. Dr. Bennett, on continuing his observations still further, satisfied himself that pustules are not essential to the disease, though frequently present. Hence will appear the error of classifying the *porrigo lupinosa* among the pustulæ. According to Dr. Bennett, desquamation of the cuticle always precedes the development of the disease. Dr. Bennett made several observations in order to ascertain the correctness of M. Gruby's statement, viz., that the plants grow in the substance of the epidermis. He found that the entire inferior surface of the capsule is formed of epidermic scales, thickly matted together. These are lined by an amorphous, finely-granulated matter, from which the plants appear to spring. Superiorly, however, the epidermic scales are not so dense. These observations indicate the probable mode in which these plants are deposited on the scalp. We have seen that the appearance of the peculiar *porrigo* capsule was preceded by a desquamation of the cuticle. Hence, it is more probable that the matters, from which the vegetations are developed, insinuate themselves between the crevices, and under the portion of epidermis thus partially separated, than that they spring up originally below, or in the substance of the cuticle. Dr. Bennett failed, as did also M. Gruby, in communicating the disease to other individuals, or from one part of the same individual to another, although it is generally conceived to be of a highly contagious nature.

“Dr. Bennett mentions that he has observed crusts upon the face of a living common house mouse, similar in every respect to those which constitute the *porrigo favosa* in man. The crusts were of a more irregular form, prominent in the centre, not forming distinct capsules or perforated by a hair. When examined microscopically, they presented the cylindrical tubes and sporules *en masse*, in every respect identical to those which grow on the scalp of man. It has been observed that the odour of the crusts of *porrigo favosa* is similar to that of mice, which makes it not a little singular, that the mycodermatous plant, constituting this disease, should be found growing on these animals. Whether the disease be peculiar to man and the rodentia, is a question yet to be answered.”—*Med. Chir. Rev.*, 1841.

The conclusions deduced from these fairly by Dr. Bennett are, 1st. “That these vegetations always arise in living animals previously diseased; 2d. That their presence indicates great depression of the vital powers and impairment of the nutritive functions; 3d. That the peculiar constitution favourable to their growth is the tubercular or scrofulous in the mammalia, birds, or fishes, and most probably in reptiles and insects; and 4th. That the therapeutic indications are—1. To invigorate the system, and 2. To apply locally such applications as tend to destroy vegetable life. Dr. Bennett has found more than once a vegetable structure in the black deposit, which collects on the teeth and gums of individuals in the last stage of typhus.”



human skin, in the state of eggs, are there hatched, live in the form of larvæ, and emerge at length in the shape of winged insects, as the *ostrus*, so common in sheep, oxen, and horses; finally, one species of the entozoa, the *filaria medicinis* is occasionally met with developed beneath the skin.<sup>1</sup>

#### PEDICULI.

1304. The existence and development of a very great number of pediculi or lice, in a particular region, or over the whole surface of the human body, is designated under the name of phthiriasis (φθιρίασις from φθίρω pediculis).

*Pediculi* are apterous parasitic insects, the flattened bodies of which are covered with a skin which is hard at the edges and transparent in the centre; they have a small distinct oval or triangular shaped head, supplied in the forepart with a fleshy excrescence, enclosing a small sucker, which appears to be simple; they have two short filiform antennæ, with five joints, and two small round eyes. The corslet, almost square, is rather narrow in front. They have six short thick feet, all of equal length, each consisting of a haunch of two pieces, of a thigh, a cylindrical leg, and a strong sealy, conical, arched hook at the extremity. The abdomen is round, oval, or oblong, lobulated or incised, and showing eight rings on the sides. It is provided with sixteen sensible stygmata, and with a scaly point at the posterior extremity in the male.

Swammerdam not having been able to discover male organs in any of the pediculi he dissected, and having as constantly met with an ovary, concluded that these insects were hermaphrodites. Leuwenhoeck afterwards succeeded in distinguishing the male from the female, and gave an exact representation of the organs which characterize the male. According to him, the males have a bent stylette which they carry in the abdomen, and with which they can pierce the skin; he even conceives that the great itchiness which these creatures occasion proceeds from the prick of this sting, the introduction of the sucker into the skin, according to him, scarcely producing any sensation. De Geer mentions his having observed a similar sting at the extremity of the abdomen in several pediculi. According to De Geer, the end of the abdomen is rounded off in the males, whilst in the females, which have no sting or piercer, it is notched.

Pediculi are oviparous, and the females, after the intercourse which fecundates them, deposit their eggs, known by the name of nits, upon the hair and clothes. The young are not long in emerging from the eggs; they change their skin several times, and after these changes are in a state to generate. To ascertain the periods of propagation, and the length of time required for the growth of these insects, Leuwenhoeck took two females, and placed them in a black silk stocking which he wore night and day. At the end of six days, each of them, without decreasing in size, had deposited fifty eggs; at the end of

<sup>1</sup> It has been supposed possible for other animals to exist in the human skin, and Etmüller has been quoted as the authority for this assertion; he informs us, in fact, that he has seen a peculiar disease in new-born children, produced by small worms lodged underneath the skin, which occasioned violent itching and irritation only to be subdued by the expulsion of these animals. According to his account, these pretended worms, which medical men have named cirrhes, or comedones, are of a coal-black colour; they have two antennæ, and a tail terminating in a tuft of hair. But in the present day, the observations of Etmüller, and those which have been more recently published upon the same subject, by M. Bassignot (*Histoire de la maladie connue sous le nom de crinons qui attaque les nouveau-nés à Seyne, en Provence; Mémoires de la Société Royale de Médecine, 1776*) are generally allowed to be inaccurate. Sebaceous deposits within the follicles of the skin have been mistaken for worms. The *furia infernalis* of Linnæus seems also to be an imaginary worm. The characters which have been assigned to it by this celebrated naturalist, are, in great part, applicable to the gordius and filaria.

The larvæ of the genus *musca*, and of several other genera, may be accidentally developed in the meatus auditorius of children who are neglected, on the surface of ulcers, &c. Other insects sometimes inflame the skin by their stings. The bug (*cimex lectularius*), by means of its trunk, sucks out the blood and throws an acrid fluid of a peculiar nature into the wound. The bite of this insect is followed by the development of a papular or tubercular elevation of a yellowish-red colour. The gnat (*culex pipiens*) produces still more painful stings, followed by small hard tumours also of a yellowish-red, accompanied with heat and violent itchiness. The rouget, or mowers mite (*acarum autumnalis*, Linn.), fastens itself to the skin, and produces the most insupportable itching, which is soon followed by small yellowish inflamed tubercles. These insects are destroyed by bathing the skin with pure alcohol or strong vinegar. Finally, other insects, bees, wasps, hornets, spiders, ants, &c., by puncturing the skin, occasion a greater or less degree of pain and irritation.

four and twenty days the young ones had produced others in such numbers, that in the course of two months these two females might have seen eighteen thousand of their descendants!

The three species of pediculi observed on the human body are known by the name of *pediculus humani capitis* (De Geer), *pediculus humani corporis* (De Geer), *pediculus pubis* (Linnæus). They all live upon blood, sucked through their trunk, which is not seen unless when in action.

1305. *Pediculus capitis*.—The body is of a grayish-brown, the lobes of the abdomen are rounded. Linnæus considers the *pediculus capitis* as a variety of the *pediculus corporis*, from which it differs in the skin being harder and darker, and the corslet and abdomen being edged on each side by a blackish-brown streak. M. Latreille also thinks that they may be considered as a single species. The *pediculus capitis* lives on the head, and, according to Willan, does not quit the hairy scalp spontaneously.

*Pediculi capitis* are transmitted from one individual to another. Want of cleanliness and diseases of the hairy scalp do not produce them. If they are often observed among the children of the poor, whose heads are not kept clean, and in those who have long fair hair; if persons who are negligent in removing the scurf which is formed by perspiration and the use of powder, or who are affected with chronic inflammation of the hairy scalp, favus, &c., are often troubled with these insects, and if they are frequently observed among convalescents from a variety of diseases, it is merely because the want of cleanliness insures their propagation, and renders their destruction more difficult, and because certain conditions are more favourable to their existence and increase than others. Some false notions, current among the lower classes, are very favourable to the production of *pediculi*: they imagine that persons affected with these insects are generally otherwise healthy, that they suck away the *bad blood*; and, finally, that the existence of a certain number of pediculi on the hairy scalp proves a kind of drain which must not be suppressed without the greatest care. (a)

The existence of *pediculi capitis* is announced by a greater or smaller amount of itchiness. When these insects are numerous, persons affected with them are constantly scratching the head; in children, the pruritus which follows the first itchiness is sometimes accompanied by loss of sleep, and great nervous irritability. *Pediculi* multiply to a disgusting degree under the scabs of favus, and in the neighbourhood of the ichorous exudation of eczema of the hairy scalp. But although very numerous, they never cause marasmus, and still less death. The instances of the *deaths occasioned by lice*, detailed or mentioned in the dissertations of George Franck, of Franckenau, and republished, without critical remarks, in the *Dictionnaire des Sciences Médicales*, and in the abridgment of the same, are, at the best, tales to frighten children, who are negligent of their hair.

*Pediculi capitis* may always be destroyed by combing the hair frequently, or by shaving the head, when the hair is covered with nits. The same end is also as fully accomplished by washing the head with an alkaline solution, in which some of the seeds of *staphysagria* are infused. Oil of lavender, or a decoction of the smaller centaury, has been likewise recommended as an application to the hairy scalp infected with pediculi, or powdered parsley seeds may be sprinkled among the hair, with the effect of destroying them; finally, the head may be lightly rubbed with a small quantity of weakened mercurial ointment. This last means has been said to have produced very serious effects in several children, such as coma, a state of great debility followed by convulsions, &c. I have used it repeatedly, always with success, and never with any ill consequences.

1306. *Pediculus corporis*.—The body white, broad, and flat, without spots, and the eyes black; the notches or lobes of the abdomen shorter and less distinct than in the *pediculus capitis*. This species

(a) Some individuals are more disposed than others to be infested with pediculi. Parent-Duchatelet informs us, in his elaborate work on Prostitution in Paris, that the heads of very few of the unfortunate women of the town, even of the better class, are free from pediculi. It is stated that the members of one of the first aristocratic houses in England have some difficulty in keeping themselves free from *pediculi corporis*. Curling's Lectures on the Entozoa.—(*Med. Gaz.*, 1837-8.)



exists on those parts of the body which are habitually covered, on the trunk and extremities, rarely on the head. Its nits are agglomerated, and generally deposited in the folds of the linen, and other parts of the clothes; of those who live amidst filth, particularly of such as wear flannel, and to whom a change of linen is a rarity. These insects often multiply in a disgusting manner among prisoners, galley-slaves, sailors, and the aged who live in poverty and wretchedness.

The name of *phthiriasis* or *morbus pedicularis*, has been applied to the development of this species in great numbers. The *morbus pedicularis* is always the consequence of the successive and multiplied reproduction of one or more of these insects, accidentally contracted.

This insect is found on the surface of the skin of the extremities, and particularly of the chest and axillæ, in the body linen, and on the clothes generally; the skin is not altered unless the *pediculi* are extremely numerous, and the individuals have been long affected with them. In this case, small papular, conical, and reddish elevations, and still more frequently, tubercular spots, and accidental pustules, are frequently seen on the surface. Scratches and excoriations are also frequently observed. But various other concomitant lesions may exist accidentally at the same time, such as prurigo, ecchymoses, &c. Such is the *morbus pedicularis* divested of the hypothetical and unfounded details with which its history is mixed up. As to the spontaneous generation of these insects, Aristotle, Theophrastus, and Avicenna have all admitted it; attributing the occurrence to a bad state of the body, to heat and putrefaction of the blood, &c.; but this was at a period when the prodigious fecundity of these animals was not known. Some modern writers have, nevertheless, adopted this old opinion, and have quoted the following cases in support of it: 1st. An innumerable quantity of *pediculi* are sometimes observed to be developed on the head of a young infant, without any appearance of eggs on the hairy scalp, and without either the mother or nurse being affected with *pediculi*. 2d. M. Mouronval assures us that several patients, affected with prurigo *pedicularis*, have come repeatedly to the Hôpital St. Louis to beg for advice and relief; simple baths were first administered to cleanse the skin, after which the patients were clothed in fresh linen, and put into a perfectly clean bed; but notwithstanding this, the shirts of these individuals were found covered, a few moments after, with small *pediculi*, which could only have proceeded from the skin. 3d. In this strange disease (*phthiriasis*), says Lieutaud, lice appear not only in prodigious quantities on the outside, but they also generate under the integuments, and even under the pericranium; and what is still more surprising, is that some have even been found on opening dead bodies, which, after having perforated the cranium and the two envelops of the brain, were actually lodged in the *substance of this organ itself*. In opposition to these various assertions, it may be alleged that Lieutaud's cases never occurred; that the fact quoted by M. Mouronval will only be conclusive after we are assured that there existed neither *pediculi* upon the body, nor nits upon the hairs, when the persons left the bath, which was not ascertained; and, finally, that M. Bremser's remark cannot be considered as decisive, unless it be proved that the infant had not contracted nits or *pediculi* in its contact with other persons, and that its clothes had not accidentally become infested, circumstances which would require such minute examination, as it would be exceedingly difficult to carry into execution. Nevertheless, I must confess, that at the end of any serious illness in children, I have often seen the head become covered, almost suddenly, with a great quantity of *pediculi*, and when those about them were not in any way affected in the same manner.

1307. Some writers assure us, that they have seen small tumours or little elevations on the skin, full of these animals. Forest, or Forestus, says that his father had seen a case of this kind, and he himself mentions two others. Rust states, that he was once called to a consultation, in behalf of a male child, thirteen years of age, labouring under a large tumour on the head, which had resisted every variety of remedy tried for its dispersion. This tumour was very much elevated above the surface, flabby, without any fluctuation, and presented no trace either of present or former inflammation, or lesion of the integuments of the cranium. The patient, who seemed cachectic, only complained of an insupportable itchiness in the inside of the tumour. This

tumour had appeared after the termination of a nervous fever, and in the space of eight months had increased considerably. An incision was now made into it, when it was found to contain an immense quantity of small white *pediculi*. It contained nothing else, and the patient soon got well. In these later times, Dr. Heberden has quoted a similar fact from Edward Wilmot. Bernard Valentine gives an account of a man, forty years of age, who experienced the most insupportable itchiness over the whole body, the skin of which was full of small tubercles. Some of these small tumours were opened, and found to contain neither blood, serum nor pus, but such an immense quantity of *pediculi* of different sizes, that the patient was nearly dying of fright. Can we reasonably suppose that had these tumours been carefully examined, they would have been found to consist of dilated cutaneous follicles, into which *pediculi* had penetrated?

The development of *pediculi corporis* has been spoken of as a very serious disease. Some modern writers have related, after the ancient traditions, that Herod, Sylla, Ennius, Philip II, of Spain, &c., died of the *morbus pedicularis*. An examination of the viscera of these illustrious men would probably have led to a very different conclusion. Still it is possible, that a great number of these insects infesting infants or aged persons already labouring under some other disease, might occasion such insupportable itchiness and loss of sleep, as would materially aggravate the evils under which they suffered. Others have thought that the spontaneous development of *pediculi* might sometimes be salutary. M. Fournier, in the *Dictionnaire des Sciences Médicales*, quotes the case of an old man affected with rheumatic gout of the right side, in whom a great number of *pediculi corporis* were developed, although there had been no neglect of cleanliness chargeable on the patient; the pains ceased on this occurrence, and returned after the disappearance of the *pediculi*.

1308. *Pediculi corporis* are easily destroyed by sulphureous water baths, sulphureo-alkaline frictions, sulphureous fumigations, or baths of the bichloride of mercury. An unguent composed of three parts of sulphuret of mercury, one part of hydrochlorate of ammonia and thirty-two of hog's lard, is also successfully used for this purpose. The clothes should be fumigated with the vapours of sulphur or of mercury.

A variety of other compounds have been recommended, into which the seeds of the staphysagria, Cocculus Indicus, tobacco, various salts and mercurial oxides enter as constituents. The effects of some of these medicaments should be carefully watched. Frictions with tobacco ointment, or an ointment containing the active principle of tobacco, have sometimes occasioned convulsions and vomitings, and mercurial inunction may produce salivation, disorder of the bowels, and other symptoms more or less serious.

Writers who have believed in the spontaneous generation of *pediculi* with a view to destroy the unknown cause which gives rise to the development of these insects, have recommended bleeding, bitters, purgatives, anti-scorbutics, pills of the protochloride of mercury, and a variety of other remedies, which may be injurious or useful, according to the nature of the disease with which the individuals are affected upon whom these *pediculi corporis* appear.

1309. *Pediculus pubis*, Linnæus, Fabricius, Geoffroy.—This species is rather smaller than the preceding ones, its body is rounder, flatter and more compressed; its corslet is very short, and almost blends with the abdomen, which presents posteriorly two projections in the shape of horns; the feet are curved underneath. These insects remain fixed in the same situation and attach themselves very firmly to the skin, above the level of which they scarcely rise. They are found at the roots of the hairs of the genital organs, of the beard, the eyebrows, the eyelids, and the axillæ; they also occasionally propagate on the trunk and extremities, when these are pretty thickly covered with hair, but it is very remarkable that they never fix themselves on the hairy scalp. The sting of this species, which is very sharp, has led some naturalists to denominate it *pediculus ferox*. It is known in France under the name of *morpion*, and in England under the title of *crab-louse*. *Pediculus pubis* occasion an insupportable itchiness. When they are numerous, the skin appears sprinkled over with small red spots, resembling drops of blood, which are said to be produced by the excrement of these insects. Persons affected with them often detach them from the skin with their nails, and papular elevations



frequently appear on the points which they occupied. This species propagates like the preceding ones, and increases with great rapidity. Frictions with mercurial ointment over the parts where the *pediculi pubis* appear, generally succeed in destroying them, without there being any occasion to shave off the hair to which the nits of these insects are attached.

Powdering the parts infested with calomel, also destroys them. Baths of the bichloride of mercury, sulphureous water-baths and sulphureous fumnigations are more expensive and less efficacious means of getting rid of these insects.

1310. Before concluding this article, I think it necessary to observe that symptoms similar to those produced by *pediculi* may be occasioned by *acarides*, an insect very closely allied to the *ixodes*, but capable, according to M. Bory Saint Vincent of forming a new class, characterized by a small sucker, accompanied with two feelers consisting of four joints. M. Bory Saint Vincent has observed these insects upon a woman of about forty years of age, who, after having experienced violent itchiness over the whole body, was very much astonished to see thousands of acarides on all the parts which she had scratched. (*Journ. des compl. Sciences Médicales*, tom. xix. p. 182.) In a case of *prurigo senilis*, Willan also observed an insect, which he says could not be classed either with the genus *pediculus* or *pulex*.

#### Historical Notices.

1311. The first accounts of *φθειρίασις*, or *morbus pedicularis*, are to be found in Aristotle, (*Opera*, cap. xxxi. lib. v.,) a disease under which, if Pliny is to be credited, Sylla, the dictator, sunk (Plinii secundi *Natur. Hist.*, fol. Lugduni, 1587, p. 273). Galen (*Definit. Med. Gaz.*, p. 96, introd. Isag. 116), Celsus (*De Medic.*, lib. vi. sect. vi. p. 15), and Paul of Ægina (*Opera*, lib. iii. page 34), speak of *phthiriasis* of the eyelashes, and all recommend the use of staphysagria. Galen also mentions the *morbus pedicularis*. Galeni (*Opera: de theriaca, ad Pisonem*, cap. 18). Schenck (*Observ. Medicinal*, in fol. lib. v. *De phthiriasi*), and Forestus (*Opera Omnia*, fol. *De phthiriasi*), have more recently attracted attention to the *morbus pedicularis*.

In these later times, Heberden (*Commentarii de morborum Historia et Curatione*, p. 278, 8vo. Londini, 1802), has quoted a case in which a number of tumours full of pediculi were observed. Fournier (*Art. Cas. Rares in Dict. des. Sc. Méd.*, t. iv. p. 252), gives several cases of the same kind; and Marchelli (*Memorie della Soc. Medic. di Genova*), has spoken of a woman upon whom six or seven hundred pediculi were destroyed daily! (a)

#### PULICES. FLEAS.<sup>1</sup>

1312. Fleas are apterous insects, the head and corslet of which are distinct, the mouth consisting of a beak or sucker. Two species have been observed on the human body: *Pulex irritans*, *pulex penetrans*.

1313. *Pulex irritans*, the common flea, according to Linnaeus, is an apterous insect, distinguished by its oval compressed body, covered with a pretty strong skin, and divided into twelve segments, by a small head, very much compressed, rounded superiorly, truncated, and ciliated anteriorly, and by two small eyes situated one on either side. Near the origin of the beak, we find a pair of pincers inserted, which are presumed to be antennæ; they are composed of four nearly cylindrical joints; the abdomen is very large; the extremities are strong, particularly the hind ones, calculated for leaping, and have large legs, and thighs, and tarsi consisting of five joints, the last of which termi-

(a) Full accounts of *pediculi humani*, under the subdivisions of *P. humanus vel capitis*, *P. pubis* and *P. subcutaneus vel corporis*, are given by M. Raspail (*Histoire Naturelle de la Santé et de la Maladie*, 1844, t. 2e, pp. 93-104). This writer intimates that many diseases, and some of internal organs may be produced by *pediculi*. He believes that plica has this origin.

<sup>1</sup> Duméril (C.). *Art. Puce* (*Dictionnaire des Sciences Naturelles*, 8vo., t. xlv. Paris, 1826, pl. 53, n. 3, A).

nates in two elongated hooks. The two fore legs are inserted almost immediately under the head.

1314. The bite of a flea occasions as insupportable a sensation as that of a bug. The small ecchymoses which the bites give rise to, differ from petechiæ in presenting a central point, the colour of which is deeper and does not disappear under pressure, like the rosy areola which surrounds it. These insects seem to show a particular preference to some persons, and the irritation caused by their bites may occasion serious nervous symptoms in children.

1315. *Pulex penetrans*, of Linnaeus<sup>2</sup> (the penetrating flea, chiko or jigger). The beak of this species is a third longer than its anterior haunches, which distinguishes it from the preceding one. The chiko is a real scourge to the inhabitants of the West India Islands, and South America. This insect has been described by Sloane<sup>3</sup> as occurring in Jamaica, by Marggraf, in Brasil, and by Catesby, in Carolina. The female makes its way under the skin of the inhabitants of these countries, more particularly under the nails of the toes, and towards the heel; and there establishes itself. The itching it occasions is slight at first, and in the commencement nothing is perceptible but a small blackish spot; by degrees, a little tumour of the size of a pea appears on the punctured part; it is reddish if the insect be superficially situated, but no change takes place in the colour of the skin if it have penetrated deeply; this small tumour is formed by a kind of bag containing a sanious pus and a great number of small, white, oval, oblong globules, which are the eggs of the insect. Left to itself the tumour bursts spontaneously, and gives rise to an ulcer over the surface of which the eggs spread and are hatched. These insects are not long in appearing in the surrounding parts, and create in their turn other ulcers, the cure of which is very difficult and sometimes impossible. In some rare cases in which the insects insinuate themselves into the skin of the back of the foot, the ulcers which are the consequence end in caries of the bones and the loss of the toes. Gangrene has even been known to take place from this cause, and we are further assured that death may be the result of a long continuance and extensive diffusion of this animal under the skin, negroes being often seen to perish in the colonies from this cause alone. For the rest, those only who are negligent of personal cleanliness are attacked by this insect, which seems to delight in hot, filthy, and ill-ventilated places.

1316. The treatment consists in dislodging the insect; a pin is the implement usually employed to raise the skin and lay bare the bag, which must be carefully detached without being burst; the only means of destroying the chiko being to get away the bag entire. The membrane only of the bag left behind is sufficient to produce erythematous inflammation and ulcers of a very bad description. The negroes are very expert in the operation of extracting these nests of the chiko; so much so that the surgeons of the country are never called upon to practice it. After the extraction, the little wound is dressed with tobacco, either in powder or decoction, or with a decoction of certain acrid plants of the country, with mercurial ointment, calomel, a solution of the nitrate of mercury, &c.

The treatment of the ulcers occasioned by this insect, if they are neglected, becomes exceedingly troublesome, and it is only after repeated incisions that patients can be freed from the mischiefs attending the continuous presence of these creatures under the skin. (a)

(a) The justice of the title of *pulex* to this insect, and of regarding it as akin to the common flea or *pulex irritans*, is denied by M. Raspail (*op. cit.*), who expends a good deal of erudite criticism on the subject. He arrives at the conclusion that the so called *pulex penetrans*, jigger or chiko, is really the *acarus Americanus vel Ægypticus*, and the same with the European *acarus reduvius* or *tique*, that infests dogs.

M. Raspail, after describing the effects of the irritation of this insect on the skin of the human subject, enlarges the picture so as to make the subsequent and prolonged afflux and hypertrophy of tissue, to

<sup>2</sup> *Dictionnaire des Sciences Naturelles*, pl. 54, fig. 4, 5, a, a, b.

<sup>3</sup> Sloane. *A voyage to the Islands of Madeira, Barbadoes, &c.* London, 1707, vol. ii. fol. fig.—Marggraf (G.). *Historiæ rerum naturalium Brasiliæ, libri octo.* Amsterdam, 1648, fol.—Catesby (Marc.). *The natural history of Carolina, &c.* London, 1771, fol.—Audouin. *Dictionnaire classique d'histoire naturelle*, art. Chique.



## ACARUS SCABIEL.

1317. M. Raspail, so distinguished for his admirable microscopic researches, has given so complete and faithful an account of this insect that I cannot do better than copy it here. "This insect, on a cursory view, appears white; with good eyes, a number of reddish-brown spots may be perceived covering a part of its body. There is no occasion for a magnifying glass to see it plainly running on a coloured surface. It is about half a millimetre in diameter. A simple lens suffices to enable us to count the feet, distinguish the mouth, and recognize the various details which De Geer has indicated. When the insect crawls, and it is seen through a microscope, it appears flattened, and in the transparent parts it presents curved and parallel streaks which give it the appearance of the scale of a fish. Examined with a glass of the same power, the forefeet and the head are seen to be susceptible of being concealed under the body, by being curled underneath it, in the same manner as the forelegs and head of a turtle are drawn under its shell. The conformation of the dorsal surface of this insect is favourable to this action, as it overhangs the whole of the body, and advances like a shield or roof over the forefeet and head. The posterior portion of the body of this animal, examined particularly, presents eight hairs of unequal lengths, the shortest being situated towards the anus. Four of these hairs belong to the four posterior feet, and the four others are inserted two on each side of the anus, on as many small tubercles which are not distinguishable unless forced out by pressure with the point of a needle. On the disc of this dorsal surface a series or system of shining points is perceived. On looking at the animal in profile, the large white spot of the centre is found to consist of a protuberance considerably elevated; the anterior and the posterior surface are alike raised, and each of the small curves of the back is surmounted by a stiff transparent hair. The four rows of points which descend towards the anus, and towards the head, present the longest hairs. The contour of the body presents lobes of different forms according to the motions of the animal and the positions which it takes. As for the streaks which we have already mentioned, they cover the whole surface of the body. It was an error to imagine that they were only simple folds of the skin; they form a great cellular network, the cells of which are linear and hollow, and the interstices, which I entitle vascular, are in relief. This network resists sharp instruments powerfully; so powerfully, indeed, that it would be difficult for the observer, with the best inclination in the world, to transfix the insect with the point of a needle, when he was extracting it; and it is even very difficult, with the assistance of the lens and appropriate dissecting instruments, to seize and crush or divide it; it slides and bounds under the instrument, and the stiff hairs which cover its back do not a little serve to increase the difficulty of anatomizing it. Not only is the body then found to possess considerable toughness, but the feet and oval appendage, which, being rendered diaphanous by the refraction of the light, appeared to be of an extremely delicate texture, are discovered to be scaly and horny, and do not yield under the instrument.

Such are the general and particular aspects of this insect when it crawls and presents its back to the eye of the observer. But when it is turned over, and the lower surface of its body is examined, its organization is found so much more complicated as to require a more particular study. The two pairs of forelegs and the head are then clearly seen to be implanted in so many sheaths into which, however, it is impossible for them to recede. These sheaths form a sort of plastrum of a singular appearance.

The head is inserted within a notch or angle, the summit of which is prolonged upon the thorax in a line of a golden red. The head is extremely simple in its form, of a purplish colour, and curving downwards to where it ends in a sucker, which does not appear to me to be formed of any apparent system of mandibular forceps. Examined in acetic acid, two transparent vesicles appear on each side of the head, which may be naturally presumed to be the two eyes; on the

nucha two pairs of points are seen, each surmounted with a hair. These hairs, when they pass the curved head, appear to be of unequal length, because two are inserted on the posterior pair, and two on the anterior pair of points.

The edges of the sheath of the two feet nearest the head extend in two reddish lines, and approach each other at the level of the line which comes from the tail of the creature. The edges of the sheaths of the other two legs unite in the form of red lines at the convexity of those lines of which we have spoken, a distribution resembling in some sort a fan. The legs are composed of four joints and an oblique basilar piece which appears like a triangle, with its hypothenuse turned towards the posterior part of the body. Each of these articulations is covered with hairs, of which only those on the sides are visible. The last joint is covered with very short prickles, and armed beneath with a stiff hair, which is terminated by a flexible cavity, capable of producing a vacuum, like the soft glutinous pads of certain animals much higher in the scale, such as the tree frog; these pads enable the insect to fix itself in any position. The joints are not very distinct, and can only be counted after long examination. These five anterior members are half covered, as I said before, by the projection of the dorsal surface of the body.

On the belly two pairs of other organs are seen, which De Geer considered as four hairs enlarged at their bases and attached to the belly. These four supposed hairs are the four hind legs, which although shorter than the forelegs, possess the same essential organization, only they are without the apparatus, or accompaniment adapted for progression, which I shall designate under the name of *ambulacrum*. Except this trifling circumstance all that is observed in the fore feet is found in them. 1st. The reddish line which borders the sheath, the opening of the sheath, the hypothenuse, and the four articulations. Here the *ambulacra* are replaced by very long hairs. Upon the whole, the hairs of the hind feet which are nearest the head, are more developed than those of the two most remote. When seen with the lens, this arrangement of the feet looks very like De Geer's figure, and the red line bordering the sheath appears to be a hair which swells into a red vesicle in the region of the foot, and is produced in the form of a white hair at the top of the vesicle.

The anus sometimes appears projecting and sometimes hidden, but to see it very plainly it is only necessary to let the insect dry, when the dermis, on account of its hardness, retains its shape, the abdomen shrinks, and the direction of the anus is plainly seen through the transparent dermis. This animal externally is as white as snow, except the feet and the sucker; but if seen by refracted light it appears yellow, like all the white tissues of animals. This happens from the decomposition of the rays of light which pass through the organic substance, a decomposition in virtue of which the least refrangible rays, such as the yellow, alone reach the eye.

Although the hairs of the forelegs and head of this insect are directed forwards, it is easy to see that having the power of bending its feet and sucker underneath, these hairs can prove no obstacle to its progress through the skin. But the structure which facilitates this operation, is the presence of the hard papillæ of the back, which being directed backwards, offers such resistance in that direction, as prevents the creature from receding; above all it is assisted by the hard scaly case of the trunk which forms a covering like the shell of the tortoise. I think I have already remarked that the ventral is streaked in the same manner as the dorsal surface.

1318. M. Gras has described with much care the furrows or covered ways (cuniculi) already indicated by Bonomo, Casal, and Adams, and at the extremity of which the *acar* *scabiei* is generally found. In fact, if the vesicles of scabies in the hands, and in some cases in the feet, are examined with care, it will be seen that several of them present on their summits or on some part of their surface a small blackish spot; this sometimes extends in the form of a semicircle, and is found to be situated on a small whitish point. On other vesicles a blackish or whitish and sometimes a sinuous punctuated line is seen departing from this point, and traversing almost the whole surface of the vesicle; in this case, when the epidermis which is raised by the serum is removed, and examined with a lens, the punctuated line is found to be formed in its substance; with the assistance of the light of the sun, a small brownish point will be seen at the extremity of the

which it gives rise, a modification of disease analogous to, if not identical with, elephantiasis, or Barbadoes leg, Pian, and *Mal Rouge*.



cuniculus which is farthest removed from the vesicle, and on raising the epidermis in this place, the acarus can be extracted. It is worthy of remark that there is no communication between this *cuniculus*, and the cavity of the vesicle, and that it is always easy to remove the acarus without causing any discharge of serum.

M. Gras never saw two *cuniculi* begin in the same vesicle, although these covered ways frequently intersect each other. Sometimes the *cuniculi* are not seen near all the vesicles; in many individuals affected with scabies they are not even to be met with readily except on the hands; the burrows generally extend from two to four lines from the vesicles. M. Gras having placed an acarus on one of his fingers, the insect took twenty days to trace a burrow of two lines in length; another insect was only three days in making a *cuniculus* of the same extent.

There is no relation between the number of vesicles and burrows. In some persons affected with scabies, burrows are seen without vesicles in their neighbourhood; but at one end of these burrows, a small point of skin, which has lost its epidermis, and appears surrounded by a minute edging of this substance detached, is frequently observed; in other places, even such a trace of a vesicle does not exist, as occurred to M. Gras, who, having placed acari on different places in the skin, first observed *cuniculi* formed by the insects, and vesicles only some time afterwards and at a certain distance from them.

The insect may be extracted by means of a pin, by introducing the point obliquely into the epidermis, and turning it back; the acarus is often thus discovered at once, which, so long as it is not wetted with the serum of the vesicle, seems to attach itself with great ease to the point of the pin. This insect is at first motionless, and it is not until after three or four minutes that it is seen to move its legs and begin to walk with rapidity. In a temperature of from fifteen to eighteen degrees, these insects may be kept alive three or four days after their extraction.

Acari are very seldom found alive in persons affected with scabies after they have been for two or three days under treatment; and yet this disease is seldom cured before the tenth and sometimes even the fifteenth day. The acarus has been sought for in vain in individuals affected with other diseases of the skin,—prurigo, eczema, lichen, &c.

1319. In the article on scabies, I have mentioned the principal works relative to the history and particular study of this insect (§ 371), but I think it proper again to quote the work of M. Raspail and that of M. Gras, whose observations I have here copied. Raspail. *Mém. Comparatif sur l'Histoire Naturelle de l'Insecte de la Gale*, fig. 8vo. Paris, 1834.—Gras. *Recherches sur l'Acarus ou Scarcopte de la Gale de l'homme*, 8vo. Paris, 1834. (a)

#### FILIARIA MEDINENSIS. GUINEA WORM, &c.

1320. Under the name of *filaria*, a genus of the *entozoa* is indicated, the principal characters of which I shall here particularize: a cylindrical filiform and very long body, decreasing in a very slight degree only towards the extremities, which are blunt; a very small articular mouth, terminal as is the anus also, in all probability; the male organ short, somewhat rounded, and situated before the point of the tail; the intestinal canal very distinct, and extending the whole length of the body. The *filaria* inhabits the cellular tissue of animals of all classes.

1321. The most celebrated of all the species of the *filaria* has been observed in the human subject. It is known to naturalists by the name of *filaria medinensis*, (b) *dracunculus* or *Guinea worm*. The body of this species of *filaria* is of a dirty white, which becomes yellow in alcohol; its size, nearly equal in its whole extent, varies from that of a thick fiddle-string to that of a straw. The length of the *filaria medinensis* varies between nine and forty-two inches

(a) M. Raspail, in the work already quoted, (in note to § 1311,) tome Ire, pp. 441–475, gives a detailed and an amusing history of the progress of observation and opinion, respecting the *acarus scabiei*, together with engravings of the imaginary and the real insect.

(b) A name given to this worm by Avicenna, after the city of Medina, in the environs of which he had most frequently seen it.

(Heath), a foot, a cubit, and more (Kæmpfer), three feet and a half, Rhenish measure (Gründler), more than two ells (Kunsmüller), eight to ten feet (Gallandat), and even eight ells (Férmin). The head is furnished with a kind of sucker, formed by the enlargement of the lip surrounding the mouth, the orifice of which is very small. The tail is terminated by an inflected hook. The *filaria medinensis* bears the greatest resemblance to the *filaria of the monkey*.

According to the recent researches of Jacobson, certain *filaria* at least are composed, not of one single individual, but of an assemblage of individuals, living under or within the same skin. M. Jacobson received an Arab into his hospital, who had a tumour near the outer ankle, which was discovered to be occasioned by a *dracunculus*; this, after several fruitless attempts, was extracted by the ordinary process. A second tumour having appeared on the other ankle, it was laid open, and the knife having divided a portion of the worm longitudinally, a purulent-looking matter issued from the opening, which, on being examined with a microscope, presented a crowd of small elongated filiform worms, with the head somewhat enlarged, and a short tail, much thinner than the body. Upon extracting the whole of this *dracunculus*, all its parts were found to present the same appearance. That which had been extracted from the first tumours was ascertained, on examination, to exhibit precisely the same structure.

M. de Blainville presented a portion of the internal substance of this worm, collected by M. Jacobson, to the Academy of Sciences. Seen through a microscope, it was almost entirely formed of small animals, in perfect accordance with the description given by that talented anatomist. M. de Blainville thinks that it would be interesting to ascertain whether all *dracunculi* presented the same peculiar organization (*Gazette Méd.*, 1834, p. 216). (a)

1322. The history of this entozoon presents a very remarkable peculiarity, for which it is impossible to account satisfactorily at the present day. The inhabitants of the torrid zone alone are almost ever affected with it. The principal observations which have been made on this animal, have been collected in Arabia-Petrea, on the banks of the Persian Gulf, of the Caspian Sea, and of the Ganges, in Upper Egypt, in Abyssinia, in Guinea, &c. I do not believe that it has been developed in the human subject in Europe. (b)

(a) M. Raspail (*op. cit.*), denies the accuracy of this statement of Mr. Jacobson. The *filaria* consists, the former tells us, almost entirely of a very long ovary; the head and thoracic region seeming to be one of its extremities. The intestinal canal, which traverses the whole body from end to end, being very minute and easily broken, we can understand how Jacobson should have believed that this long body was only a sac filled with *vermiculi*; for, as the *filaria* is both viviparous and oviparous, it is easy to see, at a certain period, the small worm through the transparent envelopes of the ovum or egg. And again, very seldom does it happen that the *filaria* can be extracted from the body in which it is imbedded, without its head and tail being torn off under the effort of traction; and then the ovary is left, seeming to the eye of the examiner to be a tube filled with eggs.

(b) The following succinct summary of the localities and subjects of *filaria medinensis*, and the symptoms and mode of treatment when it is imbedded beneath the skin, is derived from Mr. Curling's Lectures on the Entozoa, already referred to.

*Locality and Subjects of Filaria*.—"It occurs at all ages and in both sexes, and appears to be endemic in the tropical regions of Asia and Africa, where it appears generally in the hottest seasons. It is by no means confined to the natives; many facts tend to show that it may be communicated from one individual to another; and Lind and other writers are of opinion that Europeans, on visiting the countries where it exists, become affected with it by contact with the negroes. In America it is said to make its appearance almost exclusively amongst the negroes, and chiefly in those who are newly arrived from Africa. We occasionally meet with it in this country, in individuals who have recently returned from the tropics. There is a specimen in the Museum of the College of Surgeons, twenty-two inches in length, which was extracted from the leg of a boy who was a patient of the late Sir W. Blizard, at this hospital. We have also a worm in the museum, removed by Mr. Headington, who was formerly surgeon of this hospital, from the leg of a sailor, where it had been



The filaria medinensis has been most generally observed in the subcutaneous cellular tissue of the human body, particularly of the lower limbs. Of one hundred and eighty-one cases collected by Sir

imbedded for two years; and there was another patient in the hospital at the same time, likewise affected in this way. From some observations by Sir James Macgrigor, it would appear that the disorder originating in these worms prevails at times in an epidemic form. Thus he mentions that some troops having embarked, after a residence of two months at Bombay, were attacked whilst at sea so generally, that out of three hundred and sixty, as many as one hundred and sixty-one became affected with it. Clot Bey, a French surgeon, in the service of the Pacha of Egypt, mentions that he has seen as many as a hundred patients, labouring under Guinea worm, in hospital at one time. Little seems to be known which can account for the development of this parasite, though authors have speculated abundantly on the subject. It has been noticed, however, that it occurs much less frequently amongst the officers than the common soldiers, and those who occasionally lie on the ground, or go about with their feet and arms naked."

*Symptoms.*—"The Guinea worm may remain imbedded beneath the skin for many months, without occasioning any inconvenience, but sooner or later it excites irritation and inflammation in the structures around, which vary in severity according to the constitution of the individual, and the situation and size of the worm. The symptoms commence in a formicating sensation or uneasiness under the skin, accompanied with a superficial cord-like elevation on the surface. A phlyzaceous vesicle or pustule forms, which bursting, gives exit at a circular aperture, either immediately or after suppurating for a day or two, to the head of the worm. These local symptoms are preceded usually by slight derangement of the system generally. When situated about the fingers or toes, the worm is often productive of much suffering, and is with difficulty got rid of. When deeply seated it sometimes causes considerable fever, great swelling, and tedious abscesses and sinuses, giving out a serous ill-conditioned discharge for many months without the worm making its appearance.

"The treatment consists in the cautious and gradual extraction of the worm, special care being taken to avoid breaking it across, as this accident is liable to be followed by an aggravation of the inflammation, and the formation of sinuses in its course, together with great constitutional disturbance. These unfavourable effects are attributed, by Hunter, to the contact of dead animal matter, with a large extent of living surface, to which it now bears the relation of a foreign body; such violent symptoms being rarely seen so long as the dracunculus is alive and uninjured. When the worm protrudes, it should be laid hold of and gently drawn out from its resting-place as far as possible. The part removed should then be secured at the aperture with a strip of plaster, or tied to a piece of stick, and the traction may be repeated once or twice in twenty-four hours until the entire worm is brought away—a process often requiring many days, or even a month, for its completion. Some surgeons recommend cutting down upon the middle of the animals, and by pulling simultaneously at both ends, shortening the period requisite for the removal of the dracunculus—a plan which is practised by the native Indians. When the worm is got rid of, the sinus usually closes readily. The use of internal remedies and external applications do not appear to be of any essential service. Sir James Macgrigor found that the extension of this affection amongst the troops was checked by requiring great attention in regard to cleanliness, and separating the soldiers troubled with these worms from those that were free from them."

M. Sigaud (*op. cit.*, pp. 133–35), represents the filaria medinensis to be common among the negroes of Brazil. He mentions cases in which the worm was extracted of the length of seven feet; and also a case in which violent inflammation had seized on the whole of the right leg, and gangrene, even, appeared in spots. Free incisions were practised and cataplasms of camphor and flour of manioc were applied to the parts, while tonics were administered internally. The cause of all these formidable lesions was then found to be a filaria, which, with some difficulty, was in part extracted. Cicatrization, aided by various dressings, the chief of which was the root of the *milhomens*, began about the twenty-seventh day. But, ere long the negro com-

J. Macgrigor, it is calculated that in one hundred and twenty-four of them, this worm was situated in the feet, in thirty-three in the legs, in eleven in the thighs, in two in the scrotum, and in two in the hands. Kämpfer found it in the hollow of the ham and in the scrotum; Peré has seen it in the head, the neck and the trunk; Bajon assures us that he has twice seen it under the mucous membrane of the ball of the eye, &c.; Chardin pretends that the filaria medinensis almost always occurs singly, while Bajon and Bosmann assure us that it is not uncommon to meet with several of them in one patient at the same time.

It seems to be an established fact, that this animal is never developed except on the human body. Læfser, who lived many years in those parts of Africa where the inhabitants are troubled with it, never heard that it had, on any occasion, been observed in water; and Hind, who has also carefully examined the water of these countries, never detected either these worms or their eggs in it. The contrary opinion has arisen from this species of filaria, having been taken for a true *gordius*, which is supposed to possess the power of making its way, and living underneath the skin.

The great size which the filariæ, extracted from the human body, sometimes acquire, would lead one to imagine that these animals do not occasion the phlegmon which proclaims their existence, until some weeks, or even months, after their formation. This inflammation of the cellular tissue soon ends in suppuration; and upon the spontaneous or artificial opening of the abscess, one or more inches of the filaria generally protrude.

This animal is extracted by being repeatedly and very gently drawn out. The imperfect extraction of the filaria is said to be followed by very serious symptoms.

1323. There is much difficulty in France in procuring the filaria medinensis to examine its organization. I have seen one very well preserved in the collection of the Jardin du Roi. It is about three and twenty inches long, from the head to the tail, and one line in diameter throughout. It is generally flattened, and the two terminal openings are very distinct. M. Henri Pétoz, chief apothecary to the Hôpital de la Charité, possesses another of these animals, which was extracted from the foot of a negro of Guinea. This worm is about twenty-five inches long; it is yellowish, like cat-gut, which probably arises from its having been so long preserved, dried, and rolled on a small piece of wood. One of the extremities, the tail, is hooked, and near it, under the microscope, a small tubercle is seen, in the centre of which is an opening. The other extremity, examined by a microscope, magnifying twenty-five times, appeared unequal, irregular, and jagged. The head had probably been broken or crushed. Finally, M. de Blanville says (Grundler. *Traduction Française de l'ouvrage de Bremser sur les vers intestinaux*), that he possesses a filaria medinensis, which was sent to him by M. Delorme, the author of some very interesting observations on this entozoon (*Journal de Physique, Chimie, &c.*, August, 1818). (a)

plained of fresh pains, as intense as those under which he had formerly suffered and in the same spot. On careful examination, a new inflammation was found, the centre of which was in the form of a flattened tubercle of a pale colour. This was opened, and the remainder of the worm was seen and gradually withdrawn; after which the inflammation soon subsided, and the leg was perfectly healed.

(a) The opportunity denied to M. Rayer has been afforded to M. Maisonneuve, of Paris, who has published his observations in the *Archiv. Gen. de Méd.*, of which we give a summary as follows.

"In October, 1843, he received into his wards, at the Hospital of St. Antoine, a man named Edé, aged twenty-eight, who had, five months previously, returned from Senegal, where he had served as a soldier two years and a half. About a month before he entered the hospital, he perceived on his left foot, for the first time, a small tumour, which gave rise to a dull pain in the vicinity of the articulation, and was accompanied by considerable itching, for which he in vain tried poultices, rest, and various other plans of treatment. M. Maisonneuve was surprised to see a vigorous man enter an hospital for what appeared nothing more than a very small phlegmonous tumour on the level of the posterior extremity of the fourth metatarsal bone, and merely made a small incision, afterwards ordering a poultice. On examining the wound the following day, he observed a



1324. Several writers have confounded the *filiaria medinensis* with the *Gordius aquaticus*. This mistake was the more likely to occur from the circumstance of the body of the *Gordius* being in the form of a thread, as well as that of the *filiaria*, but the former differs from the latter, in its body presenting the transverse folds of the annelida, to which natural order it belongs, inhabiting like them soft waters, slimy places, subject to inundations, &c., whilst the *filiaria* are true entozoa. In addition to this, all the *gordii* examined by M. de Blainville, presented the anterior extremity of the body, divided in the form of pincers, which is not the case in the *filiaria*. Besides, in combating the opinion of Joerdens, who thought that the *Gordius aquaticus* might make its way under the skin of the human body, M. Bosc has very judiciously remarked, that the organization of this species of *Gordius* renders it incapable of piercing the integuments, and that it has never been seen in the subcutaneous cellular tissue of the human subject. After having examined some specimens, belonging to this species of *Gordius*, which my friend Doctor Asselin and I had collected in the ditches of the forest of Meudon, we became satisfied of the accuracy of the observations of M. Bosc. Finally, it is known that Pallas no where

kind of white filament, which he seized with his fingers; it gave way, but broke when he had drawn out about six inches. On ascertaining from the patient that he had lately inhabited Senegal, it occurred to M. Maisonneuve that it might be a guinea-worm, and he then examined the man more attentively. In the vicinity of the furunculous tumour there was a slight degree of œdema, which extended to the malleoli; pressure over this region was painful. At the superior and external part of the same leg, just below the head of the fibula, there was another small tumour, very similar to the first. It was indolent, merely gave rise to slight itching, and had only been perceived by the patient about fifteen days previously. From this tumour there passed a kind of flexuous, irregular cord, which he at first thought was a varicose vein; after turning round the anterior part of the leg, it lost itself in the calf; its consistence was hard, like that of whipcord. It was evidently a second worm. The man was muscular, and in the full vigour of youth. He had never suffered any thing of the kind whilst in Senegal, nor had his white companions, although it was common among the negroes. In the course of the fortnight which followed the man's admission, several phlegmonous tumours formed round the external and internal malleolus, and on being incised, exposed different portions of the *filiaria*. It was entirely extracted, but not without some trouble, as it broke repeatedly. One day, on pressing the superior furuncular tumour, a few drops of a white fluid, like whey, escaped. This fluid was examined with the microscope, and found to contain myriads of small cylindrical worms, with thin, pointed tails. They were amazingly active in their motions, and on being examined in water, were not found to present any tentacula or appendages of any description. Some of them remained alive several days. The head of the *filiaria* showing itself at the tumour, M. Maisonneuve seized it with his fingers, but it broke. He then took up a fold of the skin over its course, and by a transverse incision, exposed several circumvolutions of the worm. It was situated in the lamellar subcutaneous cellular tissue; he dissected it out with care, passing a sound underneath, and was thus able to extract all the superior portions. It was about as thick as a crowquill, and very like the *vas deferens* near the epididymis. On exercising traction by the part exposed, it broke, and a second incision and dissection were resorted to. The remainder of the worm was found curled up on itself in the cellular tissue, like the superior part, and was obtained in the same way; a small piece of the caudal extremity was left, but extracted the following day by the patient himself.

"M. Maisonneuve remarks that this case is very interesting, as it establishes a point in natural history which has been much debated—viz., the existence of the *filiaria* as a distinct species of animal, capable of propagating itself whilst in the human economy. As long, in all probability, as the *dracunculus* merely increases in size, its presence, says M. Maisonneuve, gives rise to scarcely any local disturbance, but when the period of reproducing arrives, it makes an effort to perforate the skin, and thus occasions a furuncular tumour. It is singular that these parasitical animals should thus discharge their young externally."—*Lancet*, Feb. 8th, 1842.

met with so great a number of *Gordii aquatici* as in the lake of Waldei; but he could not learn that this worm had ever been known to make its way under the skin of any of the persons who had bathed in this lake.

#### Historical Notices.

1325. The *dracunculus* was known to the ancients: "quemadmodum, in quodam Arabiæ loco (ut aient) in tibiis hominum dracunculi vocati nascuntur, nervosa natura, colore crassitudinque lumbricis similes" (Galen Opera, fol., class. 4, de locis affectis., lib. 6). Aetius has given a very good description of it, and an account of its treatment after Leonides (*Tetrabl.* iv. sermo xi. in fol. 1549, p. 800). Avicenna (liber quartus; de venâ medeni), speaks also of having seen it. Schenck (*Obs. Medic.*, lib. v. de *dracunculis Ethiopiæ et Indiæ propriis*), has collected a number of facts relative to the history of the *filiaria*. In these later times, new, *Gonneau ou Veine de Médine et sur l'usage du sublimé corrosif dans cette maladie* (*Journ. de Méd.*, Janvier, 1760); Macgrigor, (Sir James,) medical sketches of the expedition to Egypt from India, 8vo. London, 1804; Paton, cases of Guinea worm, with observations, (*Edinb. Med. and Surg. Journ.*, t. xi.); Scott (Will.), and Kennedy (Alexander), Remarks on the *Dracunculus* (*Edinb. Med. and Surg. Journ.*, t. xvii. p. 96); Grant (Robert), extracts from a correspondence on the *filiaria medinensis* (*Edinb. Med. and Surg. Journ.*, t. xxxv. p. 122). Two cases of the extraction of several *dracunculi* performed in France, have been related by M. Brulatour (*Journ. de chimie médicale*, t. vi. p. 624). Grunbler, in his treatise, *de venâ medinensi*, has given an original representation of the *filiaria medinensis*, which has been republished in several works, and in particular in the *Encyclopédie Méthodique*, t. xxxix. fig. 3.

#### ÆSTRUS.

1326. *Æstri* are dipterous insects characterized by the almost complete absence of a mouth, which has caused them to be designated by M. Duméril *astomata*. Their larvæ deposited under the skin of the human body, and more frequently under that of the ox, occasion small circumscribed and painful inflammations.

1327. The species of *æstri* which live under the skin of animals have been described with much accuracy by Mr. Clark (*Trans. of the Linnean Society of London*). Mr. Say (*Journal of the Academy of Natural Sciences of Philadelphia*, vol. ii. pp. 353–60), thinks, with Linnæus, that there really exists a species of *æstrus*, the larvæ of which inhabit the human body; an opinion which is discountenanced by Fabricius, and other modern entomologists, but which Mr. Say founds on the following observations, contained in a letter to Dr. Harlan from Dr. Brick, who had extracted the larva, afterwards submitted by Mr. Say, and described by him in the *Journal of the Academy*. Dr. Brick writes:—"After a very sultry day's march, and being very much fatigued, I went to bathe in the Chama, a small stream emptying in the lagoon of Maracaibo. Not long after coming out of the water, I received a sting from some insect, in the left leg, over the upper and fore part of the tibia; it was several days attended with a considerable degree of itching, but without any pain, and I continued on my journey some few days longer without experiencing much inconvenience, except during several periods of perhaps two or three minutes continuance, when an acute pain came on suddenly, and was severe whilst it continued, and then as suddenly subsided. On my arrival and during my continuance at El Rosario de Cucuta, I walked with difficulty; there was a considerable tumefaction over the tibia, which had the appearance of an ordinary bile (phlegmon); in the centre there was a small black speck; the usual applications were used without any success, and the tumour became more irritated and inflamed, and thus it remained for some days, attended at times with a most acute pain, which for a few minutes was almost intolerable.

"In returning to Maracaibo, I had to descend the Cottatumba in an open boat, without any shelter, and being wet to the skin by the cold rains which fell every night, I suffered much, and was almost constantly tormented by the tumour, which became more painful at those particular periods than usual; during this passage, which lasted



for twelve days, I was induced to scarify it, and had recourse to the usual topical applications, but without success. At times I imagined that I felt something moving, and suspected that there was something alive beneath the skin.

"After my return to Maracaibo I became scarcely able to walk, and was in a manner confined to my quarters. In this situation I continued two weeks longer, the tumour having begun to discharge, and without any diminution of the painful periods.

"Being now nearly worried out, it occurred to me to try a poultice of tobacco, which was used for several nights, having previously scarified the tumour; during the day, I frequently dusted it with ashes of segars: as an ingredient I used rum instead of water in making the poultice. On the fourth morning after this remedy, I felt considerable relief, and on the fifth, with a forceps, I drew out the worm which you have now in your possession, and which was then dead.

"In a few days the sore assumed a healthy look, and in ten days was perfectly healed up—although, at times, I yet experience a heavy pain in the part from whence the worm has been taken. It had traveled on the periosteum along the tibia for at least two inches. The severe pain which I experienced for those periods, I attribute to the irritation of some of the branches of the nerves distributed to the parts by the worm in its progress. Respecting this worm there are different opinions among the Spaniards and Creoles. *Ouche* is the name it is called by some, who say it is produced by a worm which crawls on the body from the ground, and penetrating the skin, increases in size. Others maintain that they are produced from the sting of a winged insect which they call *Zancudo*;<sup>1</sup> others again call the insect *Husano*; for my part I am rather inclined to think that they are produced from the sting of a winged insect which deposits its egg.

"N. B. Should it even be proved that the form of the anterior part of this larva is owing to the violence used in extracting it, of which there is no appearance, still it will stand as distinct from other known species."

1328. Mr. Say thinks that this larva, which was sent to Dr. Harlan by Dr. Brick, belonged to the *æstrus* genus. He describes as follows:—"The form of this larva is clavate, the posterior moiety of the whole length being dilated and somewhat depressed; the segments of this portion are armed with transverse series of small, black, horny tubercles, dilated at their bases, near their tips rather suddenly diminishing to a filiform curved hook, pointing forwards and with an acute termination; these series are six in number on the back and sides, placed in pairs, and three in number on the abdomen; near the posterior termination of the body are numerous minute tubercles of the same character with the others, excepting that they conform to no regular series; the anterior moiety of the body is entirely glabrous, cylindrical, or rather elongate conic, of a much smaller diameter than the posterior portion, and truncate at the tip; the lips at the posterior termination of the body are short, and the intervening fissure of but little width.

"Total length eleven-twentieths; greatest width more than three-twentieths of an inch."

1329. Mr. Say compares this larva to that of the *æstrus* in oxen, horses, sheep, and to that of the hemorrhoidal *æstrus*, several of the characters of which it presents, but still it exhibits distinctive ones of its own. (a)

M. de Humboldt has seen in South America, Indians whose abdomens were covered with small tumours produced, as he presumed, by the larvæ of the *æstrus*. Finally, M. Howship read a paper to the Medical and Chirurgical Society of London, on the 26th Nov., 1832, on the *æstrus of the human body* in which is contained an account of two new cases, one of an *æstrus* found in the cellular tissue of the shoulder of a soldier at Surinam; the other of an *æstrus* in the cellular tissue of the scrotum of a young man of Santa Anna, in Columbia.-(*Gaz. Méd. de Paris*, 1834, p. 71.)(b)

(a) I have replaced the imperfect and in some respects erroneous extract from Mr. Say's paper, in the text, by the introduction of the main parts of it from the Journal of the Academy of Natural Sciences.

(b) M. Raspail, who is disposed to attribute so many diseases to

<sup>1</sup> "The word *Zancudo* is used by the South American Spaniards to denote several species of *culex*."—S.

## FIRST GROUP.

## INTUMESCENTIÆ.

1330. This group comprises several diseases with which the skin is not primarily affected, but which occasion hypertrophy of its different layers. These diseases, sometimes preceded or accompanied by fever at the commencement, are almost always followed by permanent *intumescence* or enlargement of the parts affected.

## ELEPHANTIASIS ARABICA.

1331. Certain *enlargements* of the limbs, scrotum, labia majora, face, &c., usually accompanied by hypertrophy of the skin, distinct from phlegmon, from œdema and from bloody tumours, have long been and are still described or designated under the name of *elephantiasis arabica*, or Arabian elephantiasis.

1332. *Symptoms*.—Elephantiasis Arabica generally attacks the lower limbs; one limb only is most frequently affected, but both may be implicated either at the same time or successively (Alard., obs. 1. 3). Hendy has described a variety of this disease under the name of *Barbadoes leg*: M. Alibert designates it by that of *lepre élephantine tuberculeuse*.

In a great number of cases this enlargement of the lower extremities is announced in an acute manner by a more or less severe pain in the groin and ham, following the course of the vena saphena, and principal trunks of the lymphatic vessels, and next by the appearance of a *red line*, or hard, knotty, tense cord, resembling a chain of small subcutaneous tumours, extending from the bend of the groin to the knee or ankle, (Hendy, cases 2. 4. 9,) or from the ankle to the groin (case 8); or still otherwise, by an attack of erysipelas. In almost all cases, the skin assumes an erythematous hue, and the subcutaneous cellular tissue becomes the seat of considerable tumefaction. The neighbouring joints are stiff and contracted; frequently from the commencement, there are long-continued shivering fits, great thirst, uneasiness, restlessness, violent retching, vomiting, occasionally delirium, then intense heat, accompanied with palpitation of the heart, followed by general or partial sweating, and the cessation of the febrile symptoms. In the course of one or more months these phenomena return in the shape of paroxysms at shorter or longer intervals, which may vary in number from three (Hendy, case 17), to fourteen in the course of a year (Hendy, case 16), or may only recur at the end of seven years (Hendy, case 19). These fits, the number and duration of which can neither be foreseen nor calculated, are followed by a progressive increase in the size of the limb, which would appear at first to be owing, in a great measure, to the deposition of a certain quantity of serum or coagulable lymph within the cellular tissue. The limb afterwards becomes hard and no longer retains the impression of the finger. The lymphatic ganglions of the groin and ham, often very much increased in size, are sometimes otherwise apparently healthy and indolent. In this second stage of the disease, it exists without any further inconvenience than that which the deformed state of the limb necessarily occasions. It sometimes assumes such extraordinary shapes, and becomes so entirely out of proportion to the other parts, that it is impossible to form an idea of the extent of alteration undergone without having seen some cases, or the drawings of the disease which have been published. In one case the tumour is full and uniform like a well-filled bag or bladder; in another, it is in divisions as if each successive fit had formed and left its own particular swelling.

After the first attacks, the skin is usually pliant, and does not exhibit any change of colour; vessels sometimes appear creeping beneath it, and give it a brownish hue; by degrees, however, it becomes hard, particularly in the neighbourhood of the ankle joint, and is covered with elevations and small veins; the epidermis then often becomes

insect and entozoic origin, asserts his belief that the cure of cancerous fungus of the uterus, in which extirpation was performed by Recamier and Marjolin in 1825, was caused by larvæ of the *æstrus*.



thickened as in ichthyosis. Finally, chaps and fissures are sometimes formed on the limb, which now becomes excessively deformed. The knee-joint occasionally becomes the seat of very obstinate chronic inflammation in these cases. Such anomalous developments are not always preceded by the symptoms of acute inflammation of the vessels and lymphatic glands, or of the veins of the inner part of the lower limbs, mentioned in almost all the recent cases of the glandular disease of Barbadoes related by Hendy, and in many others, in which it had been of long standing (cases 14, 15, 17, 18, 21). In fact, these enlargements sometimes occur after ulcers of the legs (Andral), repeated attacks of erysipelas, of lichen *agrius*, or *eczema rubrum*. The knotty, hard and tense cord is not then seen, as in the woman Berton (Alard, obs. 1). This system was not perceived by M. Bouillaud (*Archives générales de médecine*, t. vi. p. 56), in a woman whose lower extremities, enormously enlarged and as hard as a stone, had become like those of an elephant. The intumescence in this case, in fact, followed the obliteration of the crural veins and the vena cava. I have given the history of a patient in the first edition of this work, in whom the anomalous development of one of the lower extremities coincided with a varicose state of the veins of the thigh.

1333. *Anatomical researches*.—Despite these enlargements of the lower extremities, the distended skin may retain its natural thickness, and almost its natural colour; but hypertrophy more frequently takes place, at least in some parts, and there it bears a close resemblance to a fibrinous deposit, or the buffy coat of the blood; the epidermis covering it is also generally very much thickened. Mr. Chevalier (Med. and Chirurg. Transactions, vol. ix. p. 63), found the papillæ of the skin exceedingly enlarged, lengthened, and projecting from the surface of the dermis; on the points where these papillæ were less developed, the epidermis was thinner; the corion was so much hypertrophied, that in some places it was half an inch thick, and presented the granular appearance which is observed in large quadrupeds. On its inner surface it adhered to the indurated cellular tissue with which it was evidently blended. In other respects it was neither injected nor altered in its colour.

In the body of a woman who, fifteen years previously, had suffered from an ulcer in the right leg, which had increased to an enormous size, and the skin of which was very hard, rough, and of a dark brown colour, and in some places absolutely black, like that of the hand of a negro, M. Andral found the subcutaneous and intermuscular cellular tissue sensibly hypertrophied and hardened, more and more so as it lay nearer the dermis; this had also increased considerably in thickness, and in several places could not be separated from the indurated cellular tissue, each seeming to be but different degrees of the same organization. The papillary body laying over the corion was greatly developed, evidently distinct from the dermis, and appearing to stand in the same relation to it as the villi do to the intestinal mucous membrane. Situated over the papillary body, again, and between it and the epidermis, there were three very distinct layers; the innermost of the three penetrating between the eminences of the papillary body, receiving no vessels, and consisting of a fibro-cellular tissue (*couche albide profonde* of Gaultier, *couche épidermique* of Dutrochet); the second, situated more externally, composed of extremely delicate blackish filaments, interwoven in the true sense of the word, forming a network which was exactly similar to the coloured rete of the negro; finally, a third, quite close to the epidermis, and, in particular places, forming only a white line similar to the epidermic layer of the papillæ; but thicker in others, and hardened as though formed by a series of superposed scales; this was certainly the *couche albide superficielle* of Gaultier, the *couche cornée* of Dutrochet (*Archives générales de médecine*, March, 1823).

I have made similar observations on the structure of hypertrophied skin in the first edition of this work (vol. ii. p. 560). M. Gaide and I have since repeated these anatomical researches, and he has published the results (*Cases of the individuals named Allard and Fournier*). After having incised the skin in the direction of its thickness, the following layers were discovered, reckoning them from the more internal to the more superficial strata. 1st. Small lobules of adipose tissue, connected together by a healthy laminated tissue, forming a subcutaneous layer. 2d. Above this was placed the corion, represented by a transverse band of a pale yellow colour, evidently hyper-

trophied, the arcolæ of which were less distinct than in the natural state; it was, besides, loaded with a great quantity of serum, which was easily made to flow out by compressing it between the fingers. From its inner surface it sent off whitish fibrous prolongations, which penetrated some depth into the subcutaneous cellular tissue. 3d. Above the corion a second layer was seen, composed of parallel fibres, running from the outer surface of the corion towards the epidermis. This second layer, evidently formed by the papillæ elongated, and of a ruddy violet colour, was of unequal thickness in several parts, and varied from two to three lines and a half in length. These two first layers of the skin were rendered distinct one from the other, both by the opposite directions taken by their fibres, and by a transverse line which resulted from their difference in colour. Between the parallel fibres of the papillary layer small vessels might be distinguished by the naked eye; these were, of course, more distinctly perceived when examined under the magnifying glass. The superficial surface of this second layer presented small eminences, mostly lenticular, separated from one another by deep furrows, evidently formed by the most elongated papillæ, whilst the smaller ones, united in the same line, gave rise to the formation of the wrinkles of which I have spoken. By maceration, the papillæ which formed these elevations became free, and appeared, when examined under water, like the pile of velvet or plush. Above the papillæ a third layer exists, distinct from the epidermis which covers it; it is that which has been designated under the name of the *lamina albida seu cornea*. In detaching this third layer, very delicate filaments are seen tending towards little whitish bodies, situated, and, as it were, attached to the inner surface of the *lamina albida* (follicles): these small bodies, variously disposed, either singly and scattered, united in parallel series, or agglomerated in the form of larger or smaller patches, all or almost all came away with the *lamina albida* to which they adhered. Some of these follicles are perfectly round; others are longer, and terminate in a point at one of their extremities in the form of tears; others, again, still longer, appear cylindrical; some present, in their centre, or on their outer aspects, a blackish point, which would seem to be their orifice. The epidermic layer, disposed like the preceding, in the form of a membrane, and, like it, transparent, where it is not formed of accumulated squamæ, is also in contact, on its inner surface, with small follicles similar to the preceding ones. United in general in the form of patches, these were more particularly apparent on the parts which correspond to the squamæ. This disposition of the layers is always seen. From the inner surface of the epidermis small prolongations are sent off, which surround the hairs to their bulbous extremities, and are very distinct from the follicles.

1334. In elephantiasis *Arabica*, the subcutaneous cellular tissue has been found harder in proportion as it was nearer to the dermis. The adipose tissue has been known to become enlarged in a very extraordinary manner. I have also found the cellular tissue infiltrated as it is in dropsies of long standing. M. Fabre has seen the subcutaneous cellular tissue converted into a thick, hard, almost fibro-cartilaginous layer, presenting, in several places, small ossified plates, adhering so closely to the aponeurosis of the leg, and to the nerves and vessels which traverse it, that it was impossible to separate them. The sub-aponeurotic and intermuscular cellular tissue participated in the same alterations, but in a less degree. In a woman, who died in the Hôpital de la Charité in 1820, whose lower limbs were affected with elephantiasis, M. Andral found under the skin, and in the place of the muscles of this limb, which were reduced to some thin discoloured shreds, an enormous mass of hard, condensed cellular tissue, with cavities here and there filled with serum, and partaking, in more than one place, of all the qualities of cartilage. (*Precis d'anatomie pathologique*, t. i. p. 277.)

1335. Hendy has found the lymphatic glands hardened, or in a state of suppuration, and much larger than they are in their natural state. The absorbing vessels were dilated, and their coats so much weakened as to be incapable of standing injection. I never observed these large absorbing vessels in any of the cases of elephantiasis *Arabica* which I have dissected. M. Fabre says that he found it quite impossible to discover these vessels in the midst of degenerated subcutaneous cellular tissue. I have frequently found inguinal glands of much larger size than they are in a healthy state; but in scrofulous



subjects, the same morbid development is observed, without dropsy or any morbid increase in the limb having taken place. In the body of Allard, whose case M. Gaide has published, the lymphatic glands were not found to be larger than those of several other bodies which we examined for the sake of comparison on the same day; the glands of the left groin only were of a deep red, whilst those of the right side were of a milky whiteness. The vessels which were distributed to these glands were not larger than they are in the healthy state. In another patient who died of elephantiasis of both of the lower extremities (case of Fournier), the lymphatic vessels situated on the back of the left foot, and inner edge of the great toe, were as small and delicate as in the healthy state. The glands of the popliteal region had undergone no alteration; but from the left groin to the point where the aorta sends off the renal artery, a string of lymphatic glands existed, each of which was almost of the size of an almond; some of the glands of the groin were red, or reddish, others were white, and easily crushed between the fingers; those lying over the femoral artery, all those which extended from thence along the outer side of the iliac vein, and in the front of the *psaos* muscle, were white, crushing easily between the fingers, and discharging a whitish fluid like pus, or softened cerebriform matter. Besides this string of altered glands, we discovered others in the cavity of the lesser pelvis beneath the common iliac vein, forming, by their union, a sort of glandular subperitoneal layer, which extended over the internal surface of the ischium. The lymphatic vessels which were distributed to the glands of the groin were not larger than in the healthy state; and although the chain of glands of which I have spoken adhered to the iliac vein, this vessel did not appear to be evidently compressed by it. M. Bourgeoise ascertained that the lymphatic glands of the right leg were not larger than in the healthy state; the lymphatic glands of the ham presented no alteration; the inguinal and pelvic glands, not nearly so large or so numerous as those of the opposite side, disposed in a band round the iliac vessels, penetrated the smaller pelvis; in other respects they presented the same anatomical characters as those of the left side.

1336. In the *compte rendu* of M. Allard's work, and in a case since published (*Archives Générales de Médecine*, v. ii. p. 215 and 372), M. Bouillaud called the attention of the profession to the obliteration or obstruction of veins, as an occurrence, the influence of which he had already pointed out in causing the development of local dropsical affections. Since the publication of these researches I have had an opportunity of observing the contraction of one of the *venæ saphenæ*, and the obliteration of the other, in a case of elephantiasis of both legs. (*Mémoire de M. Gaide; obs. d'Allard.*) In the left leg the *vena saphena*, laid bare along its whole extent, appeared in the form of a cylindrical cord of a yellowish-white colour, and not transparent, about a third less in size than the same vein in its natural state; the cavity of this vein was found almost obliterated at the point of junction between its middle and lower third; the vessel having been cut across in this place, a central point was distinguished upon each of the cut extremities into which a fine wire of the diameter of that which is usually inserted into silver catheters could be introduced, though not without difficulty; the calibre of this vessel had become, in some sort, capillary, through an extent of about two inches; its sides being double their usual thickness; the vein cut across transversely in any point where it was contracted, continued gaping in the same manner as an artery. The femoral vein towards its junction with the *vena saphena*, contained clots of recent formation; most of the other veins of this extremity presented no alteration. The *vena saphena* of the left leg contained fibrinous clots of old formation, and adhering by their surface to the internal membrane of the vessel; the calibre of this vessel was not contracted, but its sides, like that of the right *vena saphena*, were thickened, and resembled those of an artery. I ought to add, that in estimating the thickness of the walls of these vessels, the difference which naturally exists between those of the lower extremities and those of the upper was taken into account, and that to prevent all mistake I took an opportunity of comparing the thickness of the particular veins examined in several subjects.

In the case of elephantiasis of the leg, published by M. Fabre, the *vena saphena* laid bare from one end to the other, could not be traced in the middle part of the leg; it was only found at the distance of

about four finger-breadths below this point; a very fine probe introduced into the upper and lower part of the vein led to two shut sacs. This vein in the remainder of its course was so much contracted, as only to allow the passage of a small silver stilette with great difficulty along it. Its sides were hypertrophied, and like those of an artery. The external *saphena*, except that it was nowhere obliterated, presented the same appearances; the anterior tibial and fibular veins contained blood. The posterior tibial vein was obliterated in a part of its course. No obstacle to the course of the blood existed in the popliteal, femoral, or external iliac veins, &c.

1337. Henly found the small arteries of parts affected with elephantiasis larger than they are in a healthy state. In two cases seen by M. Gaide, at the Hôpital St. Antoine, the arteries of the extremities presented no alteration. In a case, the particulars of which are related by M. Fabre, the anterior tibial and fibular arteries were ossified; they contained a little blood; the posterior tibial vein was converted into a cylindrical bony stem into which the blood no longer penetrated; the femoral and popliteal arteries were also equally ossified; similar ossifications were found in the arteries of the other extremity.

1338. In a particular case which Nægle examined, he found the tibial nerve increased in size, presenting on its surface and in its interior round and oval-shaped nodosities, forming so many small cysts which contained a clear fluid, limpid in some places, and turbid in others. In three cases of elephantiasis *Arabica* which I have dissected with great care, the nerves presented no alteration. In M. Fabre's case the great sciatic nerve, after having preserved its natural size to the middle of the thigh, afterwards increased continually in its dimensions till it reached the ham, where it was of such magnitude that its several branches were each much larger than the trunk which sent them off. In the thickness of the external popliteal nerve a gelatinous hydatiform mass was found, of a pale red colour and the size of a small almond, pretty firm in its consistence, and having the medullary fibrils of the nerve parted and applied around it. The branches of the external and internal popliteal nerves were themselves so much increased in bulk that the tibial nerve, the cutaneous muscular branch and the anterior tibial were each four times their natural size, and presented several enlargements. These nerves, although very hard, still preserved pretty evident traces of their peculiar organization. M. Ferrus met with a similar disposition of the nerves in the leg of an old woman affected with elephantiasis.

1339. Hendy commonly found the muscles softened and blanched. I have also seen them less deeply coloured than in the healthy state; in a patient of M. Fabre's, several of the muscles were increased, others decreased in size; each of them was converted into a fatty substance. They were very hard, and creaked under the scalpel; the *solæus* muscle presented this degeneration in a greater degree than any of the rest; here and there a kind of streak of bony matter appeared, which seemed to occupy the spaces between the muscles, and some of which were connected with certain bony excrescences that rose from the surface of the periosteum of the tibia.

1340. In the cases of elephantiasis of the lower limbs, which I have had the opportunity of examining anatomically, the bones had undergone no change. But in several patients, and among others, in a woman whom I attended in the Hôpital St. Antoine, the tibia of the diseased leg was three times the size of that of the opposite side; in M. Fabre's patient, too, the inter-osseous ligament of the leg only existed for the space of about an inch in the situation where the anterior tibial vessels pass through it; no further vestiges of it were seen; it was replaced by an osseous uneven lamina covered with asperities, and a line in thickness in some places. This bony lamina adhered so intimately to the tibia and fibula, that these two bones, thus soldered together in their whole extent, really formed no more than one. The surfaces of the lower peroneo-tibial articulation were so completely united that no trace of division between them could be discovered, even after more than three months of maceration. The circumference of the tibia was almost the double of that which it is in its natural state; that of the fibula in the middle was fully more than triple. These bones, thus closely united, were covered with a prodigious number of shorter or longer asperities, bedded in the soft parts, their edges being prolonged in the form of prominent ridges, twisted in various ways, so as to represent in some sort a series of canals crossed



by vessels and nerves, which ramified upon their surface. The upper surface of the bones of the foot presented similar ridges to those on the tibia and fibula. The density of the tissue of the tibia was such that it could only be sawed across with very great difficulty; in colour and compactness of texture it resembled ivory. The bony surfaces of the tibio-tarsal articulation were healthy; none of the hard or soft parts of the plantar aspect of the foot participated in these alterations. Messrs. Ferrus and Cruveilhier have observed similar morbid appearances, and M. Larrey, in his description of elephantiasis, speaks of violent pains felt along the course of the bones.

1341. With respect to lesions of the viscera accompanying or coinciding with elephantiasis *Arabica* in the lower extremities, the following is what I observed in the body of the man Fournier: the larynx, the trachea and bronchi, were natural; each of the pleuræ contained from eight to ten ounces of serum. The left lung was crepitating and loaded with serum which flowed out when pressed between the fingers; there was no trace of sanguineous engorgement in this lung, but on the posterior part of the lung of the right side there was, and the whole mass of this organ felt firmer and resisted pressure more powerfully than that of the left side.

The pericardium was in a healthy state; the heart, of the natural size, contained some fibrinous clots in the right cavities; the thoracic aorta was healthy; the cavity of the abdomen contained a small quantity of transparent serum. The internal surface of the stomach was divided into two portions by a deep line of demarkation, which separated the anterior exactly from the posterior part; in the former, the mucous membrane was healthy; the latter was, on the contrary, almost without any trace of mucous membrane, and of a dead white; its surface was covered with bluish vessels which projected from it, and contained a larger or smaller quantity of blood, so as to give this region a blue and red marbled appearance. The mucous membrane terminated abruptly in a sharply cut edge in the pyloric region, whilst towards the cardia it was continuous with the mucous membrane in a state of health; in some parts of this region the softened mucous membrane had a grayish aspect, which contrasted on the one side with the alteration which I have met, just described, and on the other with the healthy portion of the organ. The small and large intestines presented numerous vascular ramifications, separated from each other by parts in which the softened mucous membrane appeared to have lost some portion of its substance. The mesenteric glands presented no particular appearance, the liver was enlarged, and its yellow substance pretty abundant; the finger could with difficulty be pushed into its substance.

The kidneys, larger than in the healthy state, presented a more decided alteration on the left than on the right side; their whole substance, but particularly the cortical part, was of a morbid yellowish-white, very different from the usual colour of these organs. The brain and its membranes had undergone no alteration.

In another case, of a woman named Mary Allard, the peritoneum was covered with numerous granulations over almost its whole extent, particularly where it formed the epiploon; the portion of this membrane covering the intestinal canal was very much injected. The cavity of the lower pelvis was partly filled with a sero-purulent effusion; some whitish lines appeared on the stomach, over which the mucous membrane was softened, and very sensibly diminished in thickness. A similar alteration had taken place in several parts of the small intestine. In the large intestines, and particularly in the descending colon, small, round ulcers were met with, surrounded by the mucous membrane, blanched and of a dead white. In the situation of the sigmoid flexure of the colon, the subperitoneal cellular tissue was loaded with a profusion of purulent matter; large sinuses existed here, but without communicating with the intestine; this alteration extended a considerable way into the cellular tissue of the lower pelvis; the other viscera of the abdomen appeared to be in a healthy state. (a)

(a) Dr. Musgrave (*Edinb. Med. and Surg. Journ.*, No. 902), terms the disease *migratory inflammation of the lymphatic system*. He tells us: "Whatever may be its original seat, the patient is never secure, while the constitutional disturbance subsists, from a sudden retrocession to some vital organ. I have seen it in the same case translated

1342. Elephantiasis *Arabica* seldom attacks the superior extremities. M. Allard, however, quotes four cases of the disease occurring in the arms. In one (case 7) the hard and permanent swelling of the left arm occurred after the application of a blister. In another (*op. cit.*, p. 190), the right arm increased to such a size that it weighed two hundred Genoese pounds, forty of which consisted of serum; the swellings of the arm and forearm resembled a distended bladder or skin; the arteries, the veins and the nerves had undergone no alteration; but the lymphatic vessels were very much dilated and loaded with lymph. The third is a case of Fabricius Hildanus. The fourth is extracted from Hendy, who relates several others of the same description, in which the disease appeared in a very acute form, by a sort of numbness in the shoulder and arm, the enlargement of a gland in the axilla (case 13) or elbow (case 5) and a red line running over the inner part of the arm and forearm. (b)

I have myself observed three cases of elephantiasis of the upper extremity, but the progress of the disease in all was chronic. One occurred in a woman who had had the right breast taken off for a cancerous affection of the mammary gland, and in whom the lymphatic glands, become scirrhus, compressed the axillary vein (first edition, viii. p. 630); the second case I met with has been published by M.

from the scrotum to the head, from thence, after some hours, descend with the rapidity of lightning to the abdomen; again migrate to the chest, to return, perhaps, to the encephalon and prove fatal there; or, under more favourable circumstances, resume its comparatively harmless situation, and run its subsequent course, as if nothing untoward had occurred; and, while occupying the different cavities, giving rise to the ordinary symptoms of acute inflammation of that particular viscus which it had selected for its temporary abode."

(b) A parallel case is related by Dr. Sanderson, of Oxfordshire (*Lancet*, 1838-9). The narrative is interesting, and runs as follows:

"Mrs. H., aged 49, of spare habit, lymphatic temperament, and healthy constitution. Ten years ago, perceived a small tumour in the right mamma, the size of a broad bean, movable, unattended with pain or discoloration of the part. No constitutional disturbance; gradually increased to the size of a walnut, still unaccompanied by pain, but occasionally felt in the breast a slight tingling sensation. Plasters and steaming appear to have been the only remedies used by her former medical attendant, after which the surface of the breast became red, and eventually the skin gave way. No matter evacuated, but an irritable sore produced; the diseased portion, the size of a large cork, (said to have been carcinomatous, but doubtful as to its real character,) was removed by an operation five years ago. The wound has never entirely healed, but continues to this time, exhibiting an ill-conditioned appearance, and discharging a thin sanious matter. Six months after the operation, three or four glands in the axilla became enlarged and painful, and some time afterwards experienced a general sense of numbness to pass down the arm until it reached the hand, when the use of the limb appeared at once to be lost. The arm next began to swell, and a dragging, twisting pain to be felt along it; the integuments on the back part of the hand especially began to expand, and gradually to develop the extraordinary circumscribed mass of disease it at present exhibits, overhanging and projecting, as it does, several inches beyond the fingers, which seem, as it were, imbedded in it.

"The head obliged to be supported in the direction of the affected side, from the contraction of the muscles, and the natural inclination of the body to bend towards the diseased limb.

"The arm is completely covered with a thick brownish incrustation, or a sort of scaly efflorescence; and springing up in different parts of this crust, are five or six tubercles of a dusky-red colour, slightly sensible to the touch, varying in size from a pea to that of a cherry.

"There is a large massy tumour extending upwards from the dorsum of the hand, in figure and size much resembling a round quartern loaf, or what is generally called an oven or batch-cake; the surface, smooth, red, and shining, sensible to the touch, hard and firm, from time to time exhibiting a slight disposition to form a like efflorescence to that on the arm, but only in limited points, where there have first been small ulcerations and a discharge of serosity.

"The fingers are much expanded, flattened, and nearly lost in the



Gaude; the subclavian, axillary and brachial veins were here filled with a fibrinous clot of long standing, adhering to the inner membrane of these vessels, and of a yellowish-gray in the centre. In the third, which was detailed by M. Bonnet, of Poitiers, and in which the left forearm was the part affected, we found the basilic vein hard, and filled with a coagulum which adhered closely to its inner membrane; this hard and solid clot was blanched or of a grayish colour, intermixed with red striæ.

1343. The history of elephantiasis occurring in other regions of the body, is less complete; elephantiasis of the scrotum is almost the only case which has been made the subject of correct anatomical research. Elephantiasis of the hairy scalp is very rare. M. Ricord has given two cases of it in the *Revue Médicale*, vol. ix. p. 13.

1344. Elephantiasis of the face sometimes only attacks it on one side; such was the case with the patient whose history forms the subject of M. Alard's ninth case, and in whom the elephantiasis would seem to have been complicated with eczema of the ear. Willier's (Alard, case 2) is a remarkable case of elephantiasis of the face: after committing a debauch at table, this patient experienced a violent pain in the left cheek and below the zygomatic arch: this pain soon extended under the chin; the submaxillary glands enlarged and felt painful; the face swelled and became erythematous; and he experienced nausea and slight shivering fits. At the end of

tumefaction, with the exception of the little finger, which is nearly absorbed, being reduced to a mere skin. 'These parts (the fingers), have a moistened or sodden appearance, from a constant oozing of a serous fluid, proceeding from the under surface of the tumour.

"The circumference of this enormous enlargement is, at the base, 29 inches, that of the upper arm 19 inches, and that of the lower arm 15 inches.

"The most remarkable fact connected with this interesting case is, that, during all this morbid action, carried on for a period of ten years in the breast, and in these parts, the general health has been uniformly good up to the present time; appetite excellent; digestion perfect; tongue clean; bowels regular; pulse 75; no fever, nor any other constitutional disorder.

"It seems difficult to account for this extraordinary morbid formation, unless we suppose that the irritation excited in the breast, in the first instance, produced a diseased action in the lymphatic vessels and glands, from the axilla downwards, which, by repeated effusions of serous or gelatinous matter poured into the cellular membrane under the thickened skin, and upon the cuticular surface, have produced the present tumid and scaly condition of the limb. My friend, Mr. Rye, who is attending the case with me, and who intends taking a drawing of the limb, in its present state, agrees with me in thinking the disease, in character and appearance, more like that which, at the present day, is termed *elephantiasis* (the elephantiasis of this country), than any other with which we are acquainted. The case has been regarded by us as one of considerable interest, inasmuch as we are not aware of there being another exactly similar placed on record.

"The uniformly good health enjoyed by the patient, the curious alteration of the whole cuticular surface, and the extraordinary magnitude and aspect of the limb in general, and the hand, in particular, invest the history of the case under consideration with a high degree of interest and importance. Our present narrative, however, must be incomplete until an opportunity is afforded of following the disease to its termination, and of examining the pathological character of the parts involved in this peculiar morbid action. For this reason we refrain, at present, from encroaching further on your columns until the above deficiency can be supplied.

"I may just add that I have been informed by the practitioner who saw the disease in its early stages, that it then assumed very much the character of erysipelas, especially on that part of the skin covering the back of the hand; in some points appearing red and vesicating, in others pouring upon the surface a serous fluid; and, again, in others forming a slight incrustation, which afterwards desquamated; and that a constant repetition and succession of these processes were carried on, during which time the whole limb was rapidly acquiring an increased magnitude."

six months, another attack, after which the patient perceived that the face continued puffed; this attack was followed by several others, and the face became larger and larger. In similar cases tumefaction may arrive at such a height that Schenck speaks of a man whose head exceeded that of an ox in size; the lower part of the face was entirely covered by the nose, which had to be raised to enable this unhappy being to breathe (*Obs. Méd. Rar. Nov.*, &c., lib. i. p. 12). I have seen one case only of elephantiasis of the face which supervened after repeated attacks of erysipelas.

1345. This disease causes the breasts to increase to such a size, that they are obliged to be supported by bandages passed around the neck. Salmutius (Cent. 2 obs. 89), speaks of a woman whose breasts increased to such a size that they hung down to her knees. She had, at the same time, glandular tumours as large as the head of a fœtus, under the axillæ. M. Borel, physician in Castres, also quotes the case of a woman whose breasts became so large that they were obliged to be supported by straps which passed over the shoulders and neck.

1346. M. Alard relates as a case of elephantiasis, that of a lady of Berlin (*Ephem. Nat. Cur.*, 3 anno. 2, p. 71, 1694), who had an abdominal tumour, the lower part of which reached to the knees. This tumour, situated under the skin, outside of the cavity of the peritoneum, was formed of a congeries of small pouches, agglomerated, and adhering to one another, like the swimming bladders of some large fish. Seven of these cells, adhering very closely together, formed the circumference of this tumour, and an eighth occupied the centre. Each of these cells was itself divided into several small compartments, which enclosed a clear and limpid fluid, like the white of egg, but of greater consistence in some, and in several similar to the boiled white of an egg. The contents of others again, were yellowish, greenish, or reddish. On the peritoneum being opened, no vestige of disease was found in the abdominal cavity. No sensible alteration had taken place in the veins, which were only found to be a little out of place.

M. Delpech also quotes a case of elephantiasis of the walls of the abdomen, observed in a young woman, four-and-twenty years of age, born at Toulouse, who had three conical tumours on the abdomen, adhering to the sides of this cavity, near the hypogastrium and umbilicus, two on the right side, and the third on the left. These tumours were of the structure of those enlargements which constitute *andrum*; that is to say, a cellular tissue, the cells or areolæ of which are of great magnitude, separated from one another by very extensive and semi-opaque laminæ, covered with very much dilated lymphatic vessels, and some few sanguineous vessels, of extreme tenuity, and but little ramified; the intestines were filled with a serum, half liquid, half solid, and rendered almost opaque by a considerable portion of albumen.

1347. Next to the lower limbs, the scrotum is the part of the body which is most frequently attacked with elephantiasis *Arabica*; this part and the penis often acquire an enormous size when affected with the disease. This alteration has been improperly designated by Larrey under the name of *sarcocèle d'Égypte*; by Prosper Alpinus under that of *hernia carnosæ*; and by Kæmpfer, under that of *endemic hydrocele of Malabar*. M. Alard relates three cases of the disease from Hendy (obs. 16), from Gilbert (obs. 5), and from the *Ephemerides Curiosorum Naturæ* (obs. 108, p. 212). M. Dumeril has seen a remarkable case of the affection in a man upon whom all the resources which art possessed had been lavished in vain. M. Delpech relates two cases of it, one of which afforded him the opportunity of performing an extraordinary operation. This last patient, who was thirty-five years of age, had been afflicted with his infirmity for ten years. The skin of the scrotum had become excessively hard, thickened, tuberculated, and intersected with deep wrinkles; the enlargement, pasty at first, had afterwards acquired a greater consistence, and became hard and very heavy. The tumour formed by the scrotum weighed, when it had attained its maximum size, about sixty pounds; under or within this shapeless mass, the penis and the testicles were buried; it seemed to be divided into three unequal masses, two lateral and one anterior, where a sort of umbilicus was seen, through which the urine passed. This patient did not experience the erysipelatous affections, accompanied with fever, shiverings,



vomitings, &c., observed by Kämpfer (*Amanit. Erotic. fasc. 3*, obs. 8, p. 557), Hendy, and Gilbert, in similar cases.

Several other inquirers have ascertained that the disease is not always accompanied by these phenomena; and in the patient operated upon by M. Delpech, the same alterations of the skin and cellular tissue which are observed in elephantiasis of the limbs, were found; the organs of generation were healthy.

In another individual, who was operated upon by M. Larrey, one of the testicles was found to be healthy, the other smaller than in its natural state (*Campagnes*, t. ii. obs. 1, p. 122). In a third case, which has been republished by M. Alard, independently of the alteration in the skin and cellular tissue of the scrotum, it was discovered, after death, that the testicles were *inflamed like the rest of the parts*. The right testicle, after having been stripped of the tunica vaginalis, was not less than a goose's egg in size. It was divided into three compartments: a gelatinous and thick matter infiltrated the upper and lower parts, and the middle was occupied by a substance nearly the size of a walnut, into which the vasa efferentia emptied themselves, without appearing to have undergone much alteration. The tunica albuginea was much thicker than in the healthy state, and contained a pale fluid, lodged in small divisions like those of a lemon. On opening the tunica vaginalis of the left side, two quarts of serous and almost colourless fluid were discharged; the same state of things was found on the opposite side. Upon removing the integuments covering the penis, which were three fingers thick, this organ was found to be of its natural size, or even smaller than it should have been; the corpora cavernosa could not be inflated as they usually may. All the rest of the body was healthy, except the right kidney, the ulceration of which had no doubt caused the patient's death. Finally, according to Hendy, the disease peculiar to Barbadoes may attack the testicles and the inguinal glands at the same time (case 10).

Elephantiasis *Arabica* may also be complicated with scrotal hernia, of greater or less magnitude, as it was in the case of a man, named Lajoux, of Toulouse, the details of which the *Société de Médecine* of that city has published in its transactions. The following case, detailed by M. Fabre, is another instance of the same kind, occurring in an old man seventy-three years of age, who was affected with elephantiasis of the scrotum, and with double inguinal hernia. When this patient was fasting, the upper part of the tumour gave a clear sound on being struck, whilst in the lower part the sound was dull; after eating, however, the dullness extended along the whole of the right side of the tumour, and the sound remained clear in the upper part of the left side. It was enough for the patient, whilst fasting, to drink a certain quantity of liquid, to cause the sound immediately to become dull on the right side. M. Fabre concluded, and with reason, that the stomach was displaced in this case, and formed a hernia on the right side.

1348. I saw, some years ago, under the care of M. Dupuytren, in the Hôtel Dieu, a woman of the town, in whom elephantiasis *Arabica* was developed in the labia majora, which were of an enormous size. Similar cases have been collected by Gilbert (Alard, case 2), Larrey (*Campagnes d'Egypte*, t. ii. p. 127), and by Talrieu (Delpech, *mem. cit.*).

Elephantiasis *Arabica* may also be developed on the verge of the anus, a case which Bayle was the first to observe.

1349. Upon dissection, this enlargement of the cellular tissue does not present any appearance similar to scirrhus in whatever part it is incised. No scirrhus induration or cerebriform matter is discovered, but merely a kind of very hard œdema, a cellular tissue, full of a colourless fluid, which can be at all events partially squeezed out by strong pressure. The enlargement is hardly ever confined to the verge of the anus; it generally extends to a greater or less distance into the cellular tissue of the buttocks, where it terminates gradually (*Dict. des Sciences Médic.*, t. iii. p. 609).

1350. M. Alard gives a curious case as one of elephantiasis of *one side of the body*, but it is deficient in essential details, (*op. cit.*, p. 219).

Finally, certain anomalous enlargements of the tongue, of the uvula, of the submucous cellular tissue of the intestines, and of the subserous cellular tissue of the epiploons, have been assimilated by some writers

to Arabian elephantiasis, and will be described hereafter (see Glossocèle). (a)

(a) The following description of Brazilian elephantiasis, with its frequent complications, is derived from an instructive volume (*Medical Topography of Brazil and Uruguay, with Incidental Remarks*, Philadelphia, 1845), by Dr. G. R. B. Horner, of the United States Navy:

"Elephantiasis exists in every form and degree: spares no sex, age, nor condition; pays no respect to natives or foreigners; affects the poor and rich: harasses servant and master; affects the plebeian and patrician. The poor and labouring classes, however, are most annoyed by this disease; and the negro population, both the slaves and free portion, have a full share. The persons most affected with elephantiasis, strictly speaking, and according to the derivation of the name, are those who live miserably, or are obliged to make much use of their feet, and have them frequently, and for a long time, exposed to the sun without shoes or any thing else to protect them. One of the best evidences of this fact was, that I knew a sailor to bring on a violent inflammation and swelling of his feet, similar to elephantiasis, from such exposure. Had the irritation been kept up, I have little doubt a chronic affection would have been induced, and a permanent enlargement taken place. I have observed, also, that the labouring class of people, particularly men who stand or walk much, and women who are in the habit of washing clothes and immersing their hands in hot water or other warm fluids, have them or their forearms affected.

"Of the pathology of elephantiasis, it may be well for me to make a few remarks, and first of its causes. The chief remote ones at Rio are, without doubt, the heat and moisture of the climate, rendered more injurious by the miasmata and impurities without and within the crowded city, situated chiefly in valleys overhung by high mountains, and divided by hills. That these are the most efficient causes is proved by the acknowledged fact, that since John VI came from Portugal, lived at Rio, and drained, cleaned, and otherwise freed the city of noxious substances, the disease has declined considerably. The luxury and indolence of the people, and the general relaxation of their systems, from climate and other debilitating agents, may likewise be mentioned as remote causes. The exciting are, heat directly applied to the parts, and different irritating things put upon or lodged in them. Of the latter, chigues may be called the most common and efficient among the slaves and other people who are in the habit of leaving their feet uncovered. Erysipelas is one of the exciting causes, according to one of the most respectable native physicians; and when this attacks the scrotum, it becomes enlarged very rapidly: but this erysipelas is probably brought about by the same causes, primary and secondary; and as it affects the same tissues—the tegumentary and cellular—it may be looked upon as a mere premonitory symptom of ordinary elephantiasis, or that attended with increase of substance in the parts diseased. That attended with a decrease of it is called Greek elephantiasis or leprosy—as said when I spoke of my visit to the hospital appropriated to it, and is of a less acute kind—is slower in its progress—and though the parts are seldom much enlarged, without doubt is owing to the same causes in most instances. The chief difference in the two forms of the disorder consists in the action of the absorbents and capillaries. These, in common elephantiasis, excrete and add to the parts; but in the leprosy kind, the former take up and carry off, first the cellular, serous, fibrous, and other soft tissues, and then the osseous. That this is the true difference, is satisfactorily proved by what is to be seen in the patients affected in the hospital; where the same person, nay, the same part of the body, is affected with both kinds of the disease. For instance, the legs may be seen enlarged—the lips most unnaturally increased, while the toes and nose are wasting away, if not already totally absorbed. That this phenomenon should occur, is not more unaccountable than the formation of a fibrous, cancerous, or other tumour, while in the same person an ulcer should be devouring the soft tissues, or a caries be destroying the hardest bones.

"Of the two forms of elephantiasis, it is not easy to say which



1351. *Causes*.—Individuals affected with Arabian elephantiasis may suffer from a variety of acute and chronic diseases, either before or after the occurrence of the intumescence, which sometimes appears after repeated attacks of eczema. Mentzell and Bayle have seen gout coincide with Arabian elephantiasis; patients affected with elephantiasis *Græca* (see elephantiasis *Græca*), have sometimes presented, not only œdema of the lower limbs, which is common, but the true, hard, and bulky enlargement of Arabian elephantiasis also. Upon the whole, then, several alterations of the veins (varices, phlebitis, contraction, obliteration, &c., &c.), and various forms of inflammation of the skin (erysipelas, eczema, liehen, ulcers), are the diseases which are the most frequently observed before the development of Arabian elephantiasis, or during its course.

Elephantiasis Arabica shows itself above all in those parts of the body in which the venous circulation is slower than usual;—in the lower extremities, and in the scrotum in men. This disease is neither contagious nor hereditary. It is seen in persons of all ages, most frequently in adults, more rarely in the aged, and in children. Chausier presented to the society of the Faculty of Medicine of Paris, on the 1st of March, 1810, the leg of a still-born infant, on which two deep constrictions, and a considerable tumefaction of the back of the foot, very similar to elephantiasis, were seen. Out of thirty cases of this disease which I have met with in Paris, more than half had occurred without any appreciable external cause. There is not, perhaps, a department in France in which this singular affection has not been observed. Delpech assures us that he has seen numerous cases in Roussillon, particularly in the neighbourhood of Elne. According to Casal, it is very common in the Asturias. (*Hist. Natur. y médic. de el Principado de Astur.*, pp. 321, 323.) I am not aware that any other observations have been made either in England or on the Continent, with the view of ascertaining whether particular topographical

occasions the most inconvenience to the sufferers: for one lops off his members, the other enlarges them to an enormous extent—and both deprive of the means of obtaining a livelihood; one by a deficiency, the other by an excess. A seamstress and shoemaker lose their fingers by one form of the disorder; a footman and porter have their legs and scrotum so much increased by the other, that the former can only stand, and the latter has as much as he can carry about his own person. A belle, ambitious of having the smallest of feet—the most delicate of ankles—has them converted into stumps, or such heavy clubs, that all elasticity of gait is destroyed; and so far from dancing well, cannot walk with common grace. A beau, desirous of displaying his finely-formed features, and causing every belle to look with admiration at his noble Roman nose—his expressively dark eyes—has the former converted into a genuine pug, or insignificant Grecian; and only one of the latter is left to view the ruins of the once sublime bridge, and the extinction of its fiery fellow orbit.

“Cases of scrotal elephantiasis are nearly as numerous, if not quite as much so, as those of the feet; and the first attain the greatest magnitude of any other form. One or more instances have occurred where it was so large that a wheelbarrow was requisite to carry it; and two cases I saw of it were about four feet in circumference. One of them was that of a negro in the Miseracordia; another, that of a late officer of customs, who resides in the Rua dos Bazotes, or Busson’s street, which takes its name from the number of such persons residing on it. Dom Francisco H. C—— had been afflicted with the complaint only three years, and he, nevertheless, had the scrotum formed into a vast tumour of nearly the natural shape of the part. The skin was quite firm, smooth, of a reddish-white colour, and felt soft, but was firm and elastic; the prepuce spread out six or eight inches around, and divided into irregular lobes, semitransparent, fungous, and entirely concealing the glans. This was embedded in the mass. His feet and legs, just above the ankles, were correspondingly enlarged. The first were too big for shoes, and protected by moccasins; the second were bottle-shaped, and a linen sac, supported by straps, held the unwieldy scrotum. Dom Francisco is no longer able to obtain a livelihood by labour, and receives alms privately. His age is fifty-six years; and as his chin and face are becoming affected more and more, he must expect to spend the rest of his life in misery beneath the weight of his irremediable disease.”—pp. 106–8.

conditions or other circumstances have really a marked influence on the development of this disease. In the island of Barbadoes its frequency is attributed to the sudden impression of cold, to the extreme coolness of the nights, and to the currents of air which blow through all the houses. We are assured that this disease is endemic in some regions of the torrid zone, and it is principally seen on the left bank of the Ganges, in Egypt, Nubia, &c., countries which are continually under influences nearly of the same kind. (a)

1352. *Diagnosis*.—When Arabian elephantiasis is announced by febrile symptoms, accompanied with pains along the course of the veins, vessels and lymphatic glands of a limb, it presents almost the same characters as certain œdemas observed in puerperal women, in whom the principal veins of the extremities have been found obstructed by fibrinous clots. (Rayer; article *Œdema*. *Diction. de Médecine* in 21 volumes.) When the skin has become uneven or tubercular in Arabian elephantiasis, the alteration which takes place is somewhat similar to that which is seen in elephantiasis *Græca*, but in the latter the inequalities or tubercles follow spots of a tawny colour, and do not constitute its principal outward character; whilst in Arabian elephantiasis the lesser swellings and tuberculations are accidental, only appear during the last stages of this disease, and are always accompanied by other lesions of the parts under the skin. The point in brief which it is of the greatest consequence to ascertain in cases of elephantiasis Arabica, is whether the tumefaction of the parts affected, be produced by indurated cellular tissue, impregnated with serum and hypertrophied, by adipose tissue, or by an anomalous development of the skin, muscles, and other tissues which enter as component parts into the organization of the limbs or parts affected, whether the vessels and lymphatic glands be inflamed or not, and whether the enlargement be the result or not of some obstruction to the course of the blood occasioned by compression, dilation, contraction or obliteration of one or several of the veins.

1353. *Prognosis*.—According to Dr. Hendy, in some rare cases, elephantiasis Arabica has been known to get well spontaneously. A man affected with elephantiasis of the scrotum, after having had several attacks, was awakened one morning by an uncomfortable dampness round the thighs; this proved to be water which had been effused through a crack in the diseased skin. About six ounces of the fluid were collected in a basin. A few months after this the patient had another recurrence of a similar evacuation from the scrotum,

(a) The following succinct account of the geographical distribution of elephantiasis Arabica, is given by Dr. Scott, in the *Cyclopædia of Practical Medicine*.—“This disease is in a remarkable degree endemic in the island of Barbadoes, on the southwest coast of Ceylon, in the neighbourhood of Cochin, on the Malabar coast, in some parts of Japan, in Egypt, and in Abyssinia. It occurs not unfrequently in almost all of the West India islands and British settlements of South America; in the Polynesian Isles; and in the provinces of Castile and the Asturias in Spain. Sporadic cases occur over Europe generally, and perhaps in all parts of the world.

“Persons liable to this disease.—In Barbadoes elephant leg was, until about the year 1704, confined to the black population. A white inhabitant was attacked in that year; and before the year 1760, when he died, the disease was common among the white population. In general, it would appear that imported Europeans are not liable to the disease unless they reside for a considerable time in the island. It is perhaps owing to this circumstance that soldiers are very rarely affected with it.<sup>1</sup>

“In Ceylon the disease is confined to the indigenous inhabitants, including the half-caste and Creoles. Imported inhabitants, comprehending Europeans, Africans, Malays, or natives of the peninsula of India, may be said to be exempted from its influence. There is only one instance known of a native of Europe having become affected; and in his case the disease did not appear before he had been a resident at Point de Galle between thirty and forty years.

“Soldiers and other imported Europeans are not liable to it at Cochin.”

<sup>1</sup> Dr. Hendy states that horses are liable to the disease in Barbadoes, and that it had been reported to him that dogs, horned cattle, and poultry, were sometimes affected with it.



after which this part was reduced almost to its natural size. (Hendy, case 22).

1354. *Treatment*.—The inflammatory symptoms observed in the first stage of elephantiasis Arabica, should be treated by emollient applications, tepid baths and bleeding; the fears which have been entertained against bleeding are unfounded. I have employed it with success in the paroxysms, the length and intensity of which it certainly moderates. In the chronic stages of the disease, bleeding has been followed by momentary relief at least, when the patient has complained of a feeling of painful distension of the parts affected. I have also seen very happy effects produced by local bleedings, from the groin, the hollow of the ham, the axillæ, &c. The part affected, placed as constantly as possible in a position that facilitates the return of the blood towards the heart, should be covered with emollient cataplasms, or wrapped in flannels steeped in soothing and narcotic decoctions. If the enlargement is developed on one of the lower extremities, the patient should keep his bed for several weeks. (a)

Emetics and purgatives have been administered at this period with various success; I rarely make use of them myself. The antispasmodic effects of the sublimed oxide of zinc in doses of eight grains a day, have been much spoken of. Hendy assures us that this remedy allays the sickness and uneasiness which patients experience in the periodical exacerbations of elephantiasis. Several physicians of the island of Barbadoes, struck with the frequency of the vomitings during the paroxysm, have thought it necessary to encourage the sickness, and even to provoke vomiting by the exhibition of emetics. Dr. Hendy objects to this practice.

In women, pregnancy is a very unfavourable circumstance. A young woman, of Havre, having married against my advice, became pregnant three times; after each pregnancy the right leg, which was affected with elephantiasis, became more and more enlarged.

A great number of patients have been cured by compression, either alone or combined with other means. This method was completely successful in the hands of Bayle and M. Alard, in one of their patients who had been affected with elephantiasis for twelve years. A strong man was employed to press the leg of the patient every morning in all directions, during three quarters of an hour or an hour, after which a roller was firmly applied from the toes to the knee. M. Lisfranc has also been very successful in these cases by the judicious combination of scarifications, compression and local bleedings. I have myself obtained unhelped-for cures by this method. It is more especially applicable in cases of elephantiasis of the limbs, consisting of simple hypertrophy of the cellular tissue without infiltration of serum. If it does not succeed completely when the tumefaction is partly owing to anomalous development of the muscles and bony tissue, it determines at all events the absorption of a certain quantity of fat and serum, and this is a result which we are always happy to obtain. Compression alone is found to suffice in a majority of cases; scarifications seem now to be rarely used; when it is thought necessary to have recourse to them, they should be made at such a distance from each other as shall prevent the inflamed circles, which are or may be formed around them, from meeting. The inflammation produced in an extremity by twenty or thirty scarifications of from half an inch to an inch in length, is not in general considerable; if it should increase to any degree of intensity, local and general bleedings must be had recourse to in combination with emollient and cold narcotic applications. It will be necessary to wait until the first scarifications are healed before others are made; several practitioners have recommended blisters and issues to the parts affected with elephantiasis. I have tried the effect of flying blisters. The trials which have been made with arsenical preparations upon patients labouring under elephantiasis, but without any evident advantage, should not be repeated. (b)

(a) We must regard Arabian elephantiasis as a constitutional disease with febrile action and phlogosis, which, if not checked, ends in a deposit in some organ or limb. The treatment recommended by Rhazes, of general blood-letting with emetics, laxatives, diet and rest, is the best. It is that adopted by M. Rayer and also by Dr. Musgrave, who also used to apply leeches and fomentations to the limb, and administered calomel until the mouth was affected.

(b) Instances have been quite recently related (*Brit. & For. Med.*

Patients who have been affected with elephantiasis should continue to wear a laced stocking, or a tight bandage after recovery, particularly when several of the veins of the extremity are in a varicose state. (a)

1355. Harassed and worn out by the enormous weight of the parts affected, many patients have insisted upon amputation as a last resource for an incurable disease. M. Alard assures us that those who have survived such an operation have become affected with elephantiasis in other parts of the body, or that they seldom failed to sink after one or more attacks of an inflammatory affection of the viscera, to which they seemed to become liable. A woman who, from the age of fifteen years, had suffered frequent attacks of the Barbadoes malady, was so much incommoded by the size of the affected limb that she begged it might be amputated. This was done; but a short time afterwards she had so violent an attack of the disease on the other leg that she sunk under it (Hendy, case 24). A woman, named Mary Pecout, whose case I have related in the first edition of this work, underwent amputation of the right thigh, in the month of March, 1823, after having been affected with Arabian elephantiasis from the age of seven years. In January, 1825, the disease attacked the right arm, and was treated successfully by M. Lisfranc by local bleedings, scarifications, and blisters. To these unsuccessful cases of amputation, Delpach opposes that in which M. Delmas, chief prosecutor of the faculty of Montpellier, amputated the arm under circumstances exactly similar, and without its being followed by any relapse. A patient operated upon by M. Larrey for elephantiasis of the scrotum, was in a fair way of recovery when this celebrated surgeon left him to proceed to Alexandria. Authier, operated upon by Delpach, on the 11th of September, 1820, left the hospital of Montpellier in the early part of February, 1821, apparently in good health, but with a slight cough. On his arrival at Perpignan he was pale and completely blanched in appearance; his pulse was extremely small. He died on the 23d of the same month of inflammation of the liver, of the peritoneum, of the right hypochondrium, and of the pleura of the same side. M. Talrich operated with success, in 1811, on a young woman affected with elephantiasis of the sexual organs. Nægele has been equally successful in the amputation of a leg in a case of elephantiasis. The question, therefore, as to the propriety or impropriety of amputation is not entirely settled. (b)

#### Historical Notices.

1356. The first pretty accurate ideas in regard to this disease are to be found in Rhazés (cum Serapio, Averrhoë, edit. G. Franks), 1533, in Haly-Abas, and in Avicenna (*Libri de re medicâ omnes*, in fol., Venetiis, 1564, vol. i. p. 952, *elephantia*), and it is on this account that the disease we are discussing received the name of *elephantiasis Arabica* or *Arabian elephantiasis*. The disease has been since noticed by Forestus (*Opera*, lib. xxiv. p. 453), by Mercuriali (*De morbis cutaneis*, lib. ii. cap. v.), and by Kæmpfer (*Amœnit. Exot.* fasc. 3, p. 58).

*Rev.*, April 1845), of cures of elephantiasis by the use of the Carlsbad waters. Iodine, in solution, with salines, merits a full trial in conjunction with its external use in the form of ointment of iodide of potassium, or of liniment holding this salt in solution. The vapour bath is also a useful adjunct.

(a) Change of climate, or at least of locality, should be recommended.

(b) A case of elephantiasis of the scrotum occurring in a negro boy, nineteen years of age, on the island of St. Croix, is related by Dr. W. H. Ruan (*Amer. Journ. Med. Sciences*, vol. vi.), in which he amputated the diseased part. The operation was performed on the 8th of November 1828, and on the 26th of January following, the youth returned to his work on the plantation. The communication was made by Dr. Ruan, in February 1830, leaving the inference that to that date all had gone well in this case. The disease had begun in early boyhood with erysipelatous inflammation of the scrotum, penis, and surrounding skin and cellular substance.

Doctor G. R. B. Horner (*op. cit.*), says that this operation has been repeatedly performed at Rio de Janeiro, "and it is said with success in some cases."



Elephantiasis Arabica has been observed in Egypt, by Prosper Alpinus (*Medicina Methodica*, Lugd. Batav., 1719), and by the medical officers of the French army that invaded Egypt (Larrey, *Relation hist. et chir. de l'expédition d'Egypt*, in 8vo. Paris, 1812, 1817). J. Heudy (*On the glandular disease of Barbadoes*, translated into French by Alard, in *Mém. de la Société Médicale d'émul.*, t. iv. p. 44), studied it among the natives of Barbadoes. M. Alard, who has published a learned essay on this disease (*De l'inflammation des Vaisseaux absorbans, lymphatiques dermoïdes et sous cutanés, (éléphantiasis des Arabes)*, new edition, in 8vo. fig. Paris, 1824), thought that the anomalous developments which characterize it were constantly preceded by inflammation of the lymphatic vessels and glands. (a) The cases of M. Bouillaud (*Observations d'éléphantiasis des Arabes*, *Archives Générales de Médecine*, t. vi. p. 567), and some others published subsequently in the first edition of this work, and detailed under my own eye, by M. Gaide (*Observations sur l'éléphantiasis des Arabes*, inserted in the *Archives Générales de Médecine*, t. vii. p. 553), would lead us to imagine that varicose states, and contractions, and obliterations of the veins, as also eczematous and erysipelatous inflammations, were in many cases not less efficient causes of these intumescences. The researches of M. Fabre may be consulted with advantage (*Observations de l'éléphantiasis des Arabes*. *Revue Méd.*, Oct., 1830), and a case of Arabian elephantiasis, by Martini and Horack, published under the title of *Obs. rarioris degenerationis cutis in cruribus elephantiasis simulantibus*, Lipsiæ, in 4to., 1828, as also the various cases which have been published on elephantiasis of the hairy scalp (Ricord, *Revue Méd.*, t. ix. p. 13), of the arm (Hensler, *Histor. brachii partumidi*, in Haller, *Disputat. Chirurg.*, vol. v.; Ludoff, *Casus elephantiasis in brachio observata*, in 4to., Erford, 1703, in 4to.), of the scrotum and penis (Tallrich, *Revue Méd.*, t. i. p. 180; Wadd, *cases of diseased prepuce*, 4to., London), on the pathological anatomy of the skin in elephantiasis, by M. Andral (*Revue Méd.*, t. xiii. p. 224), and on the treatment of this disease, by Lemasson (*Influence salutaire d'un erysipèle sur une éléphantiasis des Arabes*. *Journ. hebdomadaire 2de série*, t. iv. p. 408), on elephantiasis cured by antiphlogistics (*Revue Méd.*, 2de série, t. iv. p. 489), and some cases of amputation published by Nægele (*Archives Gén. de méd.*, t. xiii. p. 126), and by Clot (*Gazette des hôpitaux*, 1833, p. 388), are all interesting, and all deserve to be consulted. (b)

(a) The monograph of M. Alard is both learned and comprehensive. After giving the anatomy, physiology and pathology of the absorbents, the author examines the state of the knowledge of elephantiasis among the ancients and the Arabians. He next indicates the regions in which it is met with, and analyzes the description of it by different writers. Then follow cases occurring in Europe, the precise seat of the disease, the textural and organic changes to which it gives rise, its symptoms, causes and treatment. Several good engravings are attached to the work.

(b) M. Sigaud (*op. cit.*, 1844), tells us that this disease is endemic in parts of Brazil, where it is called the erysipelas of Rio de Janeiro. It is also called elephantiasis leprosy, and Foot of St. Thomas.

Doctor Pennock, on "Observations on Elephantiasis" (*Amer. Journ. Med. Sciences*, vol. xiv.), details a case of elephantiasis of the Arabs complicated with frambæsia, which terminated fatally, and of which the post-mortem appearances are described. It will interest, we are sure, the reader, and hence is transcribed for his benefit.

"Barbier, aged twenty, by profession a joiner, entered the Hôpital St. Louis, service of M. Biéti, in the autumn of 1833. In the month of December, I collected the following facts respecting his case.

"He was born in the Department of Haute-Saône; has never been in tropical climates, but has always lived in France, and his parents were free of all cutaneous disease. His nourishment has always been good. During the first years of childhood until he was nine years of age, he enjoyed good health; from that period until the age of seventeen he was affected with a succession of abscesses in the groins, on the neck, arms, and at the external extremity of the left clavicle. From the appearances of the cicatrices, there is no doubt but that these abscesses were scrofulous. They are of a brown colour, almost livid, intermixed with white, of an irregular form, and an uneven surface.

"The present affection commenced two years ago, immediately

above the great toe of the right foot, by a slight elevation and discoloration of the skin, attended with local pain and some fever; these symptoms were followed by a small, soft, projecting tumour of a red colour which bled upon the slightest touch.

"Six months afterwards the patient contracted a blenorragia, which ceased in a month under the treatment of injections of infusion of marsh-mallow, drinking the decoction of sarsaparilla and the liquor of Van Swieten. No secondary symptoms followed, but the cutaneous affection was subsequently augmented; since that time he has not had any venereal symptoms. The disease extended itself by the successive formation of the spongy tissue from the toes to the superior part of the thigh. It presents, according to its degree, four principal forms.

"First. A small, indolent, subcutaneous tubercle of the size of a pea, causing a slight elevation of the skin. This is the commencement.

"Second. Convex elevations exactly circular rising from one to four lines above the skin, surrounded by a brown circle varying in diameter from a quarter of an inch to one and a half inches, of a red colour, soft, spongy, analogous to the fungus of wounds, and bearing some resemblance to raspberries lying side by side, and exuding a red serosity.

"Third. Masses formed by the union of the above, but of irregular forms of variable size, covering the leg and the inferior part of the thigh. The greater part of these tubercles have the same appearance as those which are isolated. Where the healing process has commenced, the surface is drier, less elevated, and not so irregular. At the superior and inferior part of the leg the vegetations have the forms of small fleshy tongues, imbricated, resembling the crest of the cock.

"Fourth. Cicatrices, which are sometimes large, smooth, of a white colour, slightly elevated above the healthy skin; sometimes the fungosities seem to have dried up without changing form, and have assumed a brown, livid appearance.

"The union of all these alterations has changed the form of the limb, and gives it the appearance of the elephantiasis of the Arabs. The circumference of the superior two-thirds of the diseased leg is one inch more than that of the corresponding part of the other: the inferior third is one inch and three-quarters more than the left. The limb is the seat of excessive itching, and when cauterization is attempted by the per-nitrate of mercury, the patient suffers excruciating pain. With the exception of the cutaneous affection, his general health appeared good during the winter of 1833-4. Treatment—Infusion of hops for habitual drink, with 3ij sub-carb. soda, per oij.; alkaline baths daily, and cauterization with per-nitrate of mercury (*nitrique acide de mercure*).

"April and May.—After the first of April, excessive diarrhœa commenced, attended with extreme prostration of strength; the tongue was red, dry; thirst extreme; abdomen slightly painful upon pressure; the pulse frequent (88), and feeble; his usual cheerfulness forsook him, his mind became depressed, and he complained bitterly of his situation. The diarrhœa was arrested at intervals by regulating his diet, and by opiates and astringents, but was renewed by the imprudent excess of the patient. During this time the vegetations, (fungosities,) and the tissue of the cicatrices ulcerated, and the diseased limb was covered with extremely painful ulcers, very irregular in their forms, their edges perpendicular, and internally of a grayish colour. The slightest pressure upon them produced an exudation of very fetid pus. With these symptoms the patient died on the second of June.

"Autopsy thirty hours after death.—The skin on every part of the diseased limb was thickened, and with the cellular tissue beneath was from one-fourth of an inch to an inch and a half thick. On the cicatrized points the epidermis was smooth, and beneath this the entire thickness of the cellular and adipose substance, with the exception of a few isolated masses of adeps, was replaced by a white, fibrous, aponeurotic tissue, which was firmly attached to and blended with the dermis. In the points in which cicatrization had not commenced, the epidermis appeared detached from the dermoid mucous tissue, which was red, thickened, slightly uneven, (*mamelonné*), bearing some resemblance to the intestinal mucous membrane, and could be raised without dissection from the subjacent adipose layer. In the middle of the thigh between the sartorius and rectus femoris muscles, was an abscess of the size of a goose-egg, containing a white tenacious pus; and on a level with the internal malleolus, all the cellular tissue, for the space of two inches, was changed into a sanious



## BARBADOES LEG.

1357. In the month of February, 1755, a fever prevailed in the island of Barbadoes, characterized by a cold stage of four or five hours duration, a hot fit, &c., headache, and frequently severe pains in the back. This fever was sometimes ephemeral, and occasionally lasted no more than four or five days; it, however, much more generally continued longer, and then there supervened inflammation of the leg similar to that which accompanies the fever of elephantiasis, but without swelling of the lymphatic glands, and without any hard cord in the limb. The inflamed part was of a vivid red; small phlyctenæ arose here and there over its surface, as in erysipelas, and desquamation took place after the cessation of the inflammatory symptoms.

An epidemic of the same description recurred during the month of February, 1757, but marked by several important varieties, which were probably ascribable to the excessive heat of the weather upon this occasion. The fever was now accompanied with pain in the stomach, nausea, cough, and sometimes with delirium and coma. The local affection was exhibited in the feet, legs or arms of either side, but never of both sides at once, and was distinguished by the same redness and swelling as in elephantiasis; the swelling, moreover, increased after the fever had ceased. During the next month many persons were no otherwise affected than with a troublesome cough, which ceased as soon as the tumour appeared on the arm or hand. The disease continued with this phasis till the month of June, when it assumed new features: the heat became more considerable, the thirst greater, the pains in the back and limbs much greater than at first, and the tumours or swellings were apt to fall into suppuration, instead of being resolved, as they were through the preceding stages of the disease. (Hendy, James. *A treatise on the glandular disease of Barbadoes*, 8vo. London, 1784.) Hillary, W. (*Obs. on the air and the concomitant epidem. diseases in the Island of Barbadoes*, 8vo. London, 1759.) (a)

## ANDRUM AND PERICAL.—PEDARTHIORACE AND ENDEMIC HYDROCELE.

1358. These are two affections analogous in their nature to Arabian elephantiasis, which prevail endemically on the coast of Malabar, in

mass of a slate-gray colour, and of a fœtid odour. At the external healthy parts of the leg, the adipose substance was two lines in thickness, soft, and of a clear light-yellow colour; in the diseased parts, on the contrary, it was an inch thick, and separated into masses by a white tissue. This tissue was firm, resistant, and was penetrated with difficulty by the scalpel; the cells formed by the interlacing of its fibres contained, beside the adeps, a great quantity of serous and gelatinous fluid. In the parts which were highly diseased, the skin was entirely destroyed, and the ulceration extended to the adipose layer; on the internal and superior part of the leg, and beneath the aponeurotic fascia, was an abscess of the size of a hen's egg, containing greenish pus, and partly lined with a false membrane. The tunics of the internal saphena vein were thickened, and when cut across, the cut extremity remained open like an artery. The tendons, bones and periosteum were healthy.

"*Thorax*.—A small group of tubercles were found at the summit of the right lung. Near these was a cavity traversed by fibrous bands, and was evidently a cicatrized tuberculous cavern. The rest of the lungs crepitant, and floated when thrown on water.

"*Heart*.—The heart was soft, and the parietes of the ventricles thin.

"*Abdomen*.—The liver was much enlarged; it not only occupied the epigastric region, but extended into the left hypochondriac; the volume of the left lobe was almost equal to that of the right, its entire weight eight pounds. Externally and internally it was yellower than usual. The gall-bladder contained a greenish bile; its ducts were unobstructed. The mucous membrane of the stomach, and the intestines, in their entire extent, had its normal colour and consistence. There was neither redness nor softening, nor induration of this tissue."

(a) There was no call for separating Barbadoes leg from elephantiasis in the preceding section, since the former is merely the latter disease endemic in Barbadoes,—as it is in so many other places. See note *antè* to § 1351.

the island of Ceylon and Japan. The one attacks the foot (*perical*), the other the scrotum (*andrum*).

1359. *Perical*, or febrile foot, is very common among the natives of Cochin. Young persons are attacked more frequently than adults, and these oftener than the aged. A very general opinion is, that the Christians, among whom the disease is very common, bring it from the Coromandel coast. The disease attacks one or other of the lower extremities; very rarely both at once, and always occurs on the lowest part.

Those affected with it have an attack of phlegmonous inflammation every month, which vanishes after a few days, but leaves a swelling which degenerates so that the extremity becomes triple, quadruple and more, its former size. It is uneven, œdematous, hard, of a scirrhus appearance, and often the seat of ulcers which discharge a serous-looking fluid. The swelling generally extends to the toes, rarely ascends above the calf of the leg, and never affects the knee. It is occasionally also observed in the thigh, which, however, may be simply infiltrated from the scrotum when this is the part affected, as it is in the endemic hydrocele. Although the tumefied part be hard, and have a brownish and deformed appearance, it never becomes gangrenous, and is not dangerous. It is only painful at the epoch of the periodic inflammation, and is troublesome solely from its weight. When the affection becomes inveterate, the limb is apt to be covered with a number of small ulcers, which render the infirmity more unbearable.

1360. *Andrum*, or endemic hydrocele, begins with an erysipelatous affection of the scrotum, which is renewed every month at the time of the new moon, and leaves a swelling behind it which is caused by the effusion of a quantity of serous fluid, the quantity of which increases from day to day, and distends the part to such a degree that it has at length to be evacuated by punctures and scarifications. This fluid is either thin and limpid, or viscid; it is always reddish in colour, and differs in its qualities according to the temperaments of patients. The disease attacks the natives and Europeans; a residence of a few years is enough to render any one subject to an attack. It is incurable in the country; but it is neither dangerous nor very troublesome. Still it sometimes happens that the testis is implicated and becomes scirrhus. If patients leave the country, the tumefaction abates gradually, unless it be complicated with sarcocele, a disease for which there is no remedy (Kæmpfer, *Amœnit. Exoticæ*, 4to., Lemgo, 1712).

## SENKI.

1361. Senki is the name given by the natives of Japan to a disease which is very common among them, so common, indeed, that among ten adults, it is difficult to find one who has not been affected with it at one time or another. Strangers, too, after a short residence in the country, are liable to the disease. It begins with pain in the belly, and spasms, particularly in the abdominal muscles, when a sense of suffocation supervenes, from the tension which then occurs between the region of the pubes and that of the false ribs and ensiform cartilage. The disease is sometimes fatal. When it abates, swellings are observed to occur here and there over the whole surface of the body; among men it often produces an enormous enlargement of the eyebrows; among females, the labia majora are beset with a congeries of tubercular or fig-like enlargements. Enlargements of these parts in the two sexes are common in Japan, and may supervene without appearing to be consequences of colic (Kæmpfer, *op. cit.*, p. 552).

## MOUTH CANKER [LABRA-SULCATA (a)], OR CHEILOCAECIE OF IRELAND.

1362. Boot describes a disease as prevailing in Ireland and even in England among children of four or five years old, characterized by a *tumefaction of the lips*, which become hard, and by projecting from the gums and teeth, give the countenance a hideous and unnatural expression. Occasionally they are divided by a deep chap or fissure into two parts, as it were, from whence there flows a sanious-looking

(a) *Labri—sulcium* in the text.



fluid, which dries up into a crust. The upper lip alone presents this anomalous enlargement in some cases, and when both are affected, the upper is always so in a much greater degree than the lower. This disease is *mouth-canker*, *labra sulcata*, or *cheilocace*. It is very generally accompanied with ulcers in the mouth, on the palate, tongue, and gums. The best treatment, we are told, is to purge patients freely with calomel, and infusion of senna, to make them drink an infusion of fumitory, rumex, patientia, and endive; to apply leeches to the lips and temples, and even to recur to general blood-letting if they be strong. The lips should be kept moistened from time to time with a decoction of honeysuckle, &c., or with a solution of sulphate of zinc, and then rubbed over with a liniment of the acetate of plumbi and oil. A blister may be applied to the arm, if the disease be obstinate, and decoction of sarsaparilla, cinchona, &c., prescribed for all drink (Boot); Arnaud (*Obs. Med. de affectibus omissis*, 12mo: Lond., 1649):

Mercurialis and Bonetus (*Sepulchret. anat.*, lib. i. sect. 21, obs. 17), also speak of this disease, upon the nature and characters of which there still hangs great obscurity. I have frequently observed a *hard and indolent tumefaction of the lips* in children of scrofulous constitution. (a)

## SECOND GROUP.

### ENDEMIC TUMOURS.

1363. This group includes tumours which are only known to occur in certain countries.

#### ALEPPO PUSTULES (BOULTON D'ALEP.).

1364. *Symptoms*.—The Aleppo pustule or spot is a disease endemic in Aleppo and several towns of Syria, which attacks almost all and sundry once in their lives. It is characterized by one or several pustules of tardy growth, which get well after having ulcerated, but leave ugly cicatrices behind them. It is denominated *habbet el seneh* (spot or pustule of a year), in Arabian, because a year is required for it to run through the whole of its stages, that is to say, to be evolved, to suppurate, and cicatrize. It begins in the shape of a small prominence of a lenticular shape, without heat, pruritus or pain. This increases insensibly to the end of the fourth or fifth month, when it may have acquired from about six lines to several inches in diameter, and be found to project about three lines. At this time it becomes the seat of acute pain, the severity of which, however, varies according to the place of the affection. Its surface becomes covered with a whitish moist incrustation, which, when very firm, is either detached completely, or only cracks in different places, and allows a quantity of purulent matter, white or of a yellow colour, and inodorous at first, which is formed slowly in the interior of the tuberculation, to escape. When the crust falls off, the surface it covered is found uneven, granulating, and of the colour of raw meat; the place is surrounded with a red areola. The crust falls off entirely or in pieces at intervals; when it remains long adherent, the discharge becomes thick, of a dark colour, and extremely fetid. The period of suppuration lasts five or six months, and ends in the formation of a dry and adhering crust, which is complete by the end of the year when the disease has been left to itself, and the patient is in other respects well. The affected part, when first exposed, is at first of a vivid red, then becomes of a reddish-brown, and by and by approaches nearly to the natural colour of the skin.

1365. All parts of the cutaneous surface may become the seat of the Aleppo pustule, but it is most generally developed on the face and extremities. The inhabitants of Aleppo have it more frequently on the face than on any other part. This is the mark which distin-

guishes them from the rest of the Syrians. Foreigners, on the contrary, are seldom attacked with it on the face. When the pustule appears on the joints, over bony projections, and on regions which are but indifferently covered with soft parts, it occasions very severe pain. M. Guilhou relates a case of this disease occurring on the scrotum in a Frenchman; such an event is very rare.

The inhabitants of Aleppo distinguish two species of this disease by the very objectionable names of *male* pustules, and *female* pustules. The former are *single*, whilst the latter occur in numbers together. Round several of the principal pustules, others of smaller size and in greater or smaller numbers, are frequently clustered; these may be so numerous, that the whole body becomes ulcerated by them. M. Guilhou once saw a Frenchman who had seventy-eight principal pustules, each surrounded by smaller ones in such numbers that the eruption at first sight had the appearance of confluent small-pox. The loss of substance which the pustule occasions is sufficient proof that the whole substance of the skin is implicated. This eruption constantly leaves an indelible cicatrice which is as various in its form as the ulcers which precede it; it is depressed, with the edges more or less oblique, sometimes rather deep, but in general superficial. The cicatrice is either smooth or rough, rarely brownish, more frequently white.

1366. *Causes*.—This disease is endemic to Aleppo and its environs. M. Gilhou assures us that a similar eruption prevails in Bagdad, on the banks of the Tigris, and of the Euphrates, and in all the villages on the road from Bagdad to Aleppo, such as Mossal, Diarbekir, Medira, and Orfa. At Aleppo, foreigners and natives, without distinction of race, sex, temperament, or profession, are affected by it. It rarely attacks infants at the breast; it is generally at the age of two or three years that it is developed. There is not a single instance of a child born in Aleppo, having reached the age of two years without having been affected with this disease. The time at which it attacks strangers is variable. It is very rarely that they suffer from the eruption till after a residence of some months. It is also often years before it shows itself; but it is the general opinion at Aleppo that it is enough to have passed some days in that city for the disease to be developed sooner or later, in whatever country the individual may afterwards happen to reside. Several facts in confirmation of this statement have been adduced. The Aleppo pustule is not contagious; it only attacks individuals once in the course of their lives.

1367. *Prognosis*.—This disease is never fatal, but the face may be horribly disfigured by it, particularly when it is situated in the neighbourhood of the eyes, mouth or nose, &c. The ulcers often partially destroy the eyelids, and the alæ of the nose; they divide the lips, cause gaps in the external ears, and always leave frightful cicatrices behind them. In fact, the cicatrices which the Aleppo pustule leaves, are the worst and most dreaded effects of the disease.

1368. *Treatment*.—The various curative means tried in this disease have seldom appeared to exert any beneficial influence. It would indeed seem advisable to confine all treatment to the use of soothing washes, to great attention to cleanliness, and to keeping the ulcers from exposure to the air; still the ceratum minii camphoratum, or cerate of Nuremberg and the actual cautery, appear to have been employed with advantage before the period of suppuration, during the third or fourth month.

#### Historical Notices.

1369. We are indebted for the principal documents we possess on the Aleppo pustule to Russel [Alex.] (Natural History of Aleppo, and the Neighbouring Country, 2 vols. 4to.), to Dr. Hasselquist (*Iter Palestinum* (in Swedish), Stockholm, 1757, 8vo.), to Volney (*Voyage en Egypte et en Syrie*, 1787), to Bo (*Mémoire sur le bouton d'Alep*, addressed to the Royal Society of Medicine, *Journal de Médecine de Roux Destillats*, vol. lviii. p. 411), to M. Alibert, who has himself seen the disease in two individuals who had lived at Aleppo, and has published several cases collected there by one of his pupils, (*sur la pyrophlyctide endémique ou pustule d'Alep*, *Revue Médicale*, Juillet, 1820, p. 62), finally to M. Disant (*Gazette Médicale*, Paris, 1832, 4to., p. 556), and to M. P. J. B. Guilhou, who have seen the disease

(a) This disease of the lips is to be regarded as a part, merely, of canker or gangrene of the mouth.—*Gangrenous Stomatitis*. See Bell & Stokes's *Lectures*, vol. i.



in the countries themselves where it prevails, during a journey made through Syria, in 1829 (*Essai sur le bouton d'Alcp.* Diss. inaug. Paris, 1833, 4to.).

## TARA OF SIBERIA.

1370. Gmelin, during his travels in Siberia, in 1740, 1741, 1742, 1743, observed a contagious epidemic, which generally prevails during the months of June and July, in the city of Tara, and on the banks of the river Irtysh. This disease shows itself at first by a species of pustule of a pale colour, and hard to the touch, which appears on different parts of the body. In the course of four or five days these pustules attain the size of the fist, without changing colour or becoming less hard. The patient then experiences great weakness, with excessive thirst, loss of appetite, drowsiness, vertigo, præcordial anxiety, difficulty of breathing, fetid breath, paleness of the face, excruciating internal pains, inexpressible anguish, and, if a copious sweat does not break out, death is inevitable from the ninth to the eleventh day.

The treatment which is considered to be infallible is always undertaken by a Cossack, who kneads the tumour all around until the blood flows from it, or he plunges a needle into it until the patient complains of the pain of the operation. He then applies a cataplasm of chewed tobacco and sal-ammoniac, which is renewed three or four times in the course of twenty-four hours, and in the space of six or seven days the cure is accomplished. No other drink than warm *quaas* or *quass*, a liquor made of leaven or flour fermented in water, is generally allowed during this interval, though chicken broth with horseradish stewed in it, is occasionally prescribed instead. Milk, meat, fish and dry vegetables are interdicted.

The parenchyma of these tumours is said to be a spongy bluish kind of flesh. Gmelin treated these tumours by opening them and powdering their interior with the red precipitate of mercury, whilst he prescribed calomel internally.

Horses contract this disease; the tumours are treated in these animals by the application of the actual cautery. (Gmelin, *Travels in Siberia*, from 1733 to 1743. Göttingen, 1731-52, 4 vols. 8vo. fig., in German.)

## THIRD GROUP.

## ELEPHANTOID DISEASES.

1371. In this third group several endemic diseases which are evidently varieties of Greek elephantiasis [*the tubercular lepra of the middle ages*], and others which evidently bear a greater analogy to elephantiasis than to syphilis, with which they have sometimes been assimilated.

## THE MAL ROUGE DE CAYENNE.

1372. Under the name of the *Mal Rouge de Cayenne*, Bajon and Bergeron have described Greek elephantiasis, or *tubercular lepra*, which is more common in this island than in any other in the French colonies. See Dazille (*Obs. sur les maladies des nègres*, 8vo. Paris, 1742, t. i. p. 300), Bajon (*Mémoires pour servir à l'histoire de Cayenne et de la Guyane Française*. Paris, 1777, 1778, in 8vo. 2 vols.), the *Rapport des commissaires de la société royale de médecine sur le mal rouge de Cayenne ou élephantiasis*. 8vo. Paris, 1786, and Bergeron's treatise (*Mal rouge observé à Cayenne*. Diss. inaug. Paris, 1823).

## RADESYPGE.

1373. *Radesyge* is a Norwegian term, synonymous with the Latin phrase *morbus atrox*, by which the physicians of the country have

designated a disease of the skin which is looked upon by some as a species of syphilis, and by others as a variety of elephantiasis; the latter opinion, according to the descriptions we have of the symptoms, seems to me the more probable of the two.

*Radesyge* shows itself in the cold and foggy season, by a feeling of weight over the whole body, lassitude of the limbs, and itchiness of the skin. Patients afflicted with this malady fly every kind of occupation; they experience a stiffness in the joints, and headache in the frontal region, accompanied with a sense of tightness in the chest, and dyspnoea. The face has a pale, livid, leaden colour, followed by plethoric redness, and running at the nose, which renders the passage of the air into the nasal fossæ difficult. The nose becomes red and swelled, the voice hoarse, the uvula elongated, and wandering pains in the limbs supervene, which subside towards morning after a very copious, viscid, and rather fetid perspiration. Some months, or some years afterwards, a dry, whitish, mealy, or furfuraceous eruption forms on the surface of the integuments, the scales of which fall off and are replaced by thicker ones which render the skin uneven, hard, and rugous. At other times an extensive discharging eruption is thrown out, which occasions most distressing pruritus. Some patients present an eruption of small spots of various colours and the size of flea-bites, at first, on the face and then over the whole body, which appear and recede alternately, particularly under the influence of a damp atmosphere. These spots are mostly insensible, and may be pricked with a needle without causing the least pain. When they ulcerate a viscid matter runs from them, and they soon become covered with scabs or scales; a serous ichor often flows from them which inflames and ulcerates the neighbouring parts with which it comes in contact. These eruptions are accompanied or followed by coppery or lead-coloured tubercles, which are evolved, first on the face and afterwards over the whole body. By degrees the skin of the forehead thickens and wrinkles, the eyelids tumefy, the cheeks swell and assume a deep red colour, the lips, swelled and stretched out, give an unnatural size to the mouth. The external ear is folded and convoluted, the eyes are surrounded by a red circle, the look becomes oblique and menacing, in one word, the face is so hideous that it inspires universal disgust and horror. The tubercles, once formed, present scales, scabs, and ulcers, on their summits. On examining the posterior fauces tubercles are seen on the uvula, tonsils, and velum palati, to which foul ulcers succeed. These ulcers have callous, hard, uneven edges, from which a reddish and fetid matter is discharged, which dries up into reddish or brownish crusts. The skin situated between the ulcers is also often intersected with ridges or crevices, and the hair with which it is covered falls out. The violent pains in the limbs decrease, and sometimes cease entirely, as soon as the skin is affected. Arrived at this pitch, the disease still continues to advance. The ulcers, after having destroyed the integuments and soft parts, extend their ravages to the bones; the discharge is now extremely copious and of a most unbearable odour. Flaps of fungous flesh are detached from the bottom of the ulcers, caries attacks the bony palate, vomer and ossa nasi, the voice changes and becomes weak, articulation is difficult, the hair of the head and of all the other parts of the body, eyebrows, &c., falls off; sometimes even the phalanges of the fingers drop. Patients are at the same time said to have a most voracious appetite, and unquenchable thirst. These phenomena are regarded as the forerunners of approaching death. This happens when the strength is entirely exhausted by night sweats and colliquative diarrhoea.

As to the treatment of *radesyge*, much the same course has been recommended as that followed in elephantiasis, or in cases of syphilitic affection, according as it has been held analogous to the first or to the second of these diseases.

## Historical Notices.

1370. Dr. Ludwig Hunefeld, in his work on *radesyge* or Scandinavian syphiloid (*Die Radesyge oder Scandinavische Syphiloid*. Leipzig, 1828, Extract. in *Bull. des sc. médic. de Férussac*, t. xviii. p. 387; t. xx. p. 410), has given an account of the principal researches made into the nature of the disease. Consult Holst (*Morbus quem radesyge vocant, quinam sit, quanquam ratione e Scandinavia tollendus*, 8vo. Christianiæ, 1817), Munk, (*Mémoire sur le radesyge*, *Act de l'Ac. Roy.*



*des sc. de Stockholm*, 1815). Arbo (*Afhandl. om radesygens Kjen-detegn.*, &c., Copenhagen, 1793), and Voug (Jac.) (*Diss. inaug. sistens, obs. in exanthema arcticum vulgo radesyge dictum*. Gryphix, 1811, &c.)

## LEPRA OF HOLSTEIN. (SPEDALSKEDE.)

1374. Doctor Struve assigns the following characters to this disease: the face swelled, sallow, and shining; loss of the hair, eyebrows and eyelashes; swelling and change of colour in the nose; the tongue tubercular; the lips swelled and hard; alteration of the voice, and difficulty of breathing. Struve looks upon the lepra of Holstein and radesyge as the same, or as mere varieties of the same affection; he assimilates them to the lepra of the middle ages. Struve (*Ueber die aussatzartige Krankheit Holstein's, allgemein daselbst die Marsch-Krankheit genannt*, 8vo. 1820. Extract, in *Edinb. Med. and Surg. Journ.*, vol. xviii. p. 92).

## LEPRA TAURICA.

*Disease of the Crimea, or Lepra of the Cossacks.*

1375. Pallas, Gautier and Von Martius have described, under this name, a disease which prevails extensively among the inhabitants of the Crimea, and which was introduced, as is said, by the Russian troops engaged in the war with Persia.

According to Martius, the lepra taurica, with or without fever, is announced by the appearance of a great number of livid spots, or flat, indolent tubercles on the face, trunk and extremities, principally on the radial side of the wrist. At a later period (according to Martius, in the following year), the spots increase in number and size, and become of a blackish or brown colour; every part of the body except the skin of the hands, and the bends of the joints, may become covered with these spots; at this period the spots are not painful; the voice is occasionally hoarse, and the patient is restless and depressed. Still later (about the third year), a feeling of itchiness arises in the parts of the skin affected, similar to that occasioned by the bites of ants. The tubercles now become true flattened tumours, some of which are indolent, whilst others are the seat of intolerable itchiness. The shape of the body and face alters; the face swells; the lymphatic glands tumefy; and at this stage of the disease great weakness of the internal organs and considerable prostration are observed. In the fourth year great pain in the limbs, and particularly in the joints, comes on; the sleep and appetite, which, up to this time, were unaffected, fail; the strength decreases by degrees; the spots and tumours assume a reddish-brown hue, become hard, rough, and covered with squamæ. Scirrhus lumps are seen under the skin of the face and extremities, and under the tongue. In the *fifth year* the swellings begin to give way, and, particularly on the feet, are followed by ulcers of bad character, from which a fetid sanies is discharged, or which are covered with thick scabs. These ulcers have been seen to involve the loss of all the points of the fingers in succession. Tormented by a sense of insupportable heat in other parts, the patients, by scratching, give rise to ulcers, even of a more serious nature than the first. The manner in which the natives treat these ulcers, further, renders the slightest wounds of the greatest consequence. Finally (sixth year), the cheeks, lips, velum palati, and tongue, are corroded by ulcers, which often form on the inside of the nose, and in the trachea, when they occasion great interruption to the breathing. The nails, by this time, have generally been lost or are much altered. The viscera become more and more diseased, and death at length concludes the patient's misery. (Martin's Henricus, *de lepra taurica, specimen medico-practicum*, 8vo. Lipsiæ, 1806.)

## LEPRA ANÆSTHESIACA OF INDIA.

1376. Robinson gives the characters of this disease in the following terms:

One or two circumscribed spots or patches of a deeper colour than

that of the skin around them, appear on the feet or hands, and sometimes on the trunk and face; these spots are neither prominent nor depressed; they are shining and wrinkled; the wrinkles do not run into the surrounding healthy skin. The spots extend slowly until the skin of the legs and arms, and, by degrees, that of the whole body, when the disease is so extensive, is totally deprived of feeling. No perspiration takes place from the surfaces affected, neither are they itchy nor painful, and it very seldom happens that they are swollen. In a more advanced stage of the disease the pulse becomes very slow, (fifty to sixty pulsations in a minute,) and soft without being small; constipation of the bowels follows; the toes and fingers are benumbed as though with cold, shining, slightly swelled, and somewhat stiff. The patient is indolent, slow in understanding the questions put to him, and seems to be constantly half asleep. The soles of the feet, and palms of the hands present hard and dry cracks; a furfuraceous matter is deposited under the nails, which raises them, and occasions the skin around them to ulcerate. The legs and forearms swell; the skin is everywhere rough and chapped; at the same time ulcers form on the metacarpal and metatarsal articulations of the fingers and toes, in the line of flexion, and in the corresponding parts of the articulations of the trunk, without any evident tumefaction or pain; pieces of skin, half an inch in length, become gangrenous and fall off, leaving the pale and flaccid muscles bare; these, in their turn, mortify, and by and by are also cast off. Different joints may be thus attacked, and destroyed in succession, by the slow but uninterrupted progress of this terrible disease, which renders those who are affected with it objects of horror to all who approach them. The pains in this affection are not insupportable; the appetite is unaffected, and patients, horribly mutilated, sometimes live long, without appearing to be disgusted with life. They are finally carried off by dysentery and diarrhœa. Robinson assures us that, although *tubercular elephantiasis* sometimes shows itself during the course of *elephantiasis anæsthesiaca*, it is not necessarily consequent on it. (*Transact. of the Medic. and Chirurg. Society of London*, vol. 10.)

## JEWISH LEPROSY (SARAA).

1377. Moses (xiii. and xiv. chap. of Leviticus), in his laws concerning leprosy (Saraa), points out the signs or marks by which the Jewish priests might recognize it. Dom Calmet has given the following summary of these: the first indication is an outward tumour; the second is a pustule or abscess; the third a whitish or red and shining spot, to which the epithets *white*, *brilliant* are often applied. Whoever presented one or more of these marks, was shut up for seven or fourteen days. The certain signs of leprosy were, first, a whitish, reddish, and shining spot; second, the hair pale and red on the same place; third, the part more deeply sunk than the rest of the skin.

A simple white spot was not sufficient to cause a man to be declared a leper; it was necessary that this should grow and increase. When the whole body was white from the head to the feet, it was a *pure leprosy*; and when the flesh was covered with white tumours, and the hair, on the parts where these were seen, had changed colour and become white, it was an *inveterate leprosy*, and rooted in the skin.

If, in a cicatrice or in a place which had been burned, a white tumour or a whitish spot was seen, shining or red, more depressed than the surrounding parts, and the hair of which had become fair or pale, it was a mark of a *true leprosy*. Finally, when any place was seen in the head of man or woman, more sunk than the rest, if the spot increased, it was leprosy, whether the hair changed colour or not. On the head of a bald person, spots, either whiter or redder and more shining than the surrounding parts, indicated leprosy.

1378. The Jewish leprosy has been assimilated with several other diseases. Bartholinus, J. Leclerc, and others associate it with tubercular elephantiasis; Hillary and Adams think that it was nothing more than the frambœsia of Africa; Bateman believes it to correspond with the *leuce* of the Greeks, with the *baras* of the Arabians, and with the third species of *vitiligo* of Celsus; Lorry and several others regard it as a distinct disease; but at the present day, possessing these scanty accounts only, it is evidently impossible to form any thing like a definite and just idea of the nature of this disease.



*Historical Notices.*

1379. On the Jewish leprosy, consult Mead (*Medica Sacra*, London, 1749), Dom. Calmet (*Diss. ou recherches sur la nature et les effets de la lèpre dans la Sainte Bible*, Latin et Français, Svo. 1820, t. iii. p. 19); Oussel (*Diss. Philologico-medica de leprâ cutis Hebræorum*), Schilling (*de Leprâ*, p. 63), and Boussille-Chamseru (*Recherches sur le véritable caractère de la lèpre des Hébreux*. Mém. de la Soc. Méd. d'Emulation, t. iii. p. 335).

## MALUM MORTUUM.

1380. The *malum mortuum* observed in the middle ages, has been described by Théodoric and Joannes de Vigo. "Quædam infirmitas nascitur circa tibias et brachia, quæ *mal mortuo* appellatur. Sunt enim ulcera livida et sicca modicæ saniei generativa, quandoque fiunt de purâ melancholiâ naturali; quandoque e melancholiâ cum admissione phlegmatis salsi; si illud, cognoscitur per nigras pustulas sine pruritu; si hoc, livescit locus cum pruritu e mordicationibus" (Théodoric, *Chirurg.*, lib. iii. c. 49). "Malum mortuum est squalida scabies maligna et corrupta in brachiis, coxis et tibiis, faciens pustulas crustosas cum saniositate subtus ad instar lupini . . . Sumitur per viam contagionis. . . In signis, curis et causis plurimum confert cum morbo gallico; quæ uni conferunt, alteri conferre videntur . . . Pustulæ sunt aliquantulum extra cutim elevatae cum colore mori semimaturi . . . scarificatione profunda usque ad os parvum aut nihil patiens sentire videtur (De Vigo, *Tract. in arte Chirurg.*, etc., c. v. p. 3).

The *malum mortuum* has been assimilated with gangrenous elephantiasis and elephantiasis anæsthesiaca.

M. Alibert (note on the *genus spiloptaxia*, *malum mortuum* of some pathologists, *Revue Médicale*, 1829, vol. iv. 169), has given the details of a case of disease which he met with in the course of his practice, and which he believes to be similar to the *malum mortuum* of the middle ages.

## FOURTH GROUP.

## SYPHILOID DISEASES.

This group comprises epidemic syphilitic, and other analogous diseases.

## DISEASE OF THE DISTRICT OF CHAVANNE-LURE.

(*Département de la Haute Saône.*)

1381. M. Flamand writes as follows, on the 6th of October, 1829: "I have now satisfied myself that a disease having the reputation of being contagious, has existed in the district of Chavanne for the last eighteen months; up to this time from twenty to five-and-twenty persons, and probably even more, have been affected with it; for the inhabitants, from a sense of false shame, being unwilling to confess that they are its subjects, several have undoubtedly eluded my researches, and those of the mayor of the place. It begins with sensations of general weakness, followed by pain, more or less acute in its character, in the limbs, which increases during the night, and which the patients compare to that of rheumatism. These pains continue, in different cases, from a fortnight to four or five months, and successively attack several of the articulations. Afterwards an inflammatory swelling takes place on the lips, which become covered on the inside with whitish aphthæ, and which crack, acquiring twice and even three times their usual size. The inflammation soon shows itself in the throat, attacks the uvula, the tonsils, and the velum palati, and occasions an extinction of voice, which, in some persons, is almost complete. As soon as these inflammatory symptoms appear, the pains

in the limbs diminish, and entirely cease as they increase. In some persons a pustular eruption breaks out over the whole body, but more particularly upon the head. The pustules are accompanied with intolerable itchiness, which, however, ceases on their bursting and discharging a little purulent matter. These pustules are rather large, and of a livid red colour; they leave marks on the skin, traces of which are seen long afterwards. One individual had the pustules on the head only, and in another the symptoms of the disease were accompanied by a tedious ophthalmia, and a considerable flow of tears; this second stage lasts several months, and even a year.

In two-thirds of the persons who have been affected, the disease appeared to me to get well spontaneously; others still retain some of the symptoms. It has not, as yet, been fatal to any one. A man, named Pierre François Goudey, twenty-eight years of age, was the first who was attacked; it is now twenty-eight months ago. The first symptoms were general weakness, and disinclination to work, then pains in the limbs, which lasted about two months; afterwards, inflammatory and aphthous swellings of the lips and inside of the mouth, for nine months; at the same time inflammation occurred in the posterior fauces, and an extinction of the voice supervened, which lasted for three months; an inflammatory affection also appeared on the scrotum, which the patient attributed to the rubbing of his drawers of coarse new linen cloth. No vestiges now remain of the disease, nor of any of its symptoms. Goudey communicated the affection under which he laboured to his three young children, all of whom suffered from the swelled and aphthous state of the lips; one only from the inflammatory symptoms of the throat, and the hoarseness. His wife, with whom he cohabited, was the only individual of the family who did not catch the infection from him, which would seem to indicate that the union of the sexes is a means very little apt to communicate this disease, although it is regarded as a peculiar modification of syphilis. Goudey having been made prisoner, and detained for three days, by a troop of Austrians, at Montbéliard, at the time of the second invasion, pretends that he contracted the disease by drinking out of the same glass immediately after a soldier of that nation, who, he said, had the disease on the lips. It was not until some time after his return home, that Goudey felt the first symptoms of his malady. Elizabeth Goudey, fourteen years of age, assures me that she caught the infection from the children of the above-named Goudey, her relations, from having eaten with them; she experienced the pains in the limbs, swelling of the lips, inflammation of the throat, and loss of voice. Her brother, Claude François Goudey, about fifteen years of age, contracted the disease some time after his sister, and experienced the same symptoms, with ophthalmia, in addition, which lasted several months; the eyelids, indeed, are still slightly injected, and the eyes watery. The wife of Jean Baptiste Goudey thinks she caught the disease from Elizabeth Goudey, from her being so frequently in the house, and going often there to her meals. The disease showed itself in her by very intense pains in the limbs. These pains began in the lower limbs, and attacked, successively, the shoulders, elbows and wrists, and lasted about five months. She had had a general pustular eruption, though the head was the part more particularly affected; the marks of this still exist in the shape of spots of a livid red. Her lips were not inflamed, but she had aphthæ on the tongue, and inflammation of the throat, which, as well as the hoarseness, was still complained of. The husband of this woman took the disease six months after her; he only suffered from pains in the limbs for a fortnight; his throat is in a high state of inflammation, and this is accompanied by an almost complete extinction of voice. The inhabitants of Chavanne are persuaded that this disease is particularly propagated through the medium of the implements used in taking food, which is the more likely to be the case, as it is known that country people make use of these one after another without any attention to cleanliness. The following cases seem to strengthen these opinions . . . . .

"Since the month of March I have had those individuals under my care who still showed any of the symptoms of the disease; I recommended the use of the warm bath, and of tonics, and mercurial preparations, particularly the liquor of Van Swieten, internally. I had the satisfaction of finding that this treatment succeeded, and of seeing the disease entirely disappear from Chavanne, without having



been communicated to the adjoining districts." (*Journal Compl. du Dict. des Sci. Med.*, t. v. p. 134.)

## DISEASE OF THE BAY OF ST. PAUL. (CANADA.)

1382. Between the years 1776 and 1780, a disease which has been designated under the names of the *disease of the Bay of Saint Paul*, *le mal de chicot*, *le mal des éboulemens*, appeared in Canada, particularly in the Bay of St. Paul. According to Dr. Bowman,<sup>1</sup> who was sent by Governor Hamilton, to investigate the nature of the disease, it was announced by the appearance of a number of small pustules on the lips, tongue, and inside of the mouth. These pustules, which resembled small aphthæ, advanced rapidly; and children have been seen whose tongues were almost entirely destroyed by them. The whitish and puriform matter they contain communicates the infection to those who touch it. Patients are tormented with nocturnal pains in the bones, but these generally subside when ulcers appear on the skin and in the interior of the mouth; cervical, axillary and inguinal buboes are often met with; at a more advanced stage, the body becomes covered with pruriginous tetters, which soon disappear. The bones of the nose, palate, cranium, pelvis, thighs, arms, and hands, become affected with nodes and caries; all the functions become greatly disordered; the senses are disturbed, the patients die a prey to the most acute sufferings. Some individuals, however, are so robust that they stand out against this complication of infirmities for many years, dragging on a most miserable life; entire limbs have been sometimes known to sphacelate and fall off. This frightful disease spares no one, but it seems to rage with peculiar virulence among children. It is, above all, by the sexual act, that it is communicated or transmitted from one individual to another.

Decoctions of the roots of *patientia*, of *actium lappa*, and *sarsaparilla*, are the remedies usually employed to arrest its progress. A decoction of a species of fir, or beer, made with a decoction of the branches and bark of the pine of Canada (*Pinus Canadensis*) has also been approved. The inhabitants of some parts of Canada, and among others, those of the Bay of Saint Paul, where the disease spread extensively, pretend that it was brought among them by the English. The peculiarity most worthy of remark connected with the history of this disease is, that it rarely attacks the organs of generation, and that it may be contracted without any actual intercourse with individuals affected with it, even without touching them immediately.

Swediaur observes that Dr. Bowman's description, however imperfect it may be, recalls to his mind the account which the writers of the fifteenth century have given of syphilis. The similarity to scherlievo is still more striking.

## DISEASE OF FIUME, OR SCHERLIEVO.

1383. This epidemic disease, the origin of which was attributed to four sailors, who were supposed to have brought it from Turkey, appeared in 1800, in the districts Scherlievo, Gronemico, Fiume, &c. It was supposed by others, again, to have been imported in 1790 from Kukulianova, by a peasant named Kumzut. A short time after his return, his father and mother were affected by it, and afterwards propagated it in Scherlievo, &c. The disease spread with so much rapidity in 1801 in the provinces of Buccari, Fiume, Viccodal, and Fuccini, that in a population of from fourteen to fifteen thousand individuals, it was calculated that more than four thousand five hundred were affected with it. Messrs. Percy and Laurent assure us that a commission of physicians appointed in Sept. 1801, found more than thirteen thousand persons affected with this disease, out of a population of thirty-eight thousand. It reappeared in 1808 and 1809, raging especially in Scherlievo, where it seemed to be kept up by the filth of the lower orders of the people, whose damp cabins are shared with their domestic animals.

1384. *Symptoms*.—This disease usually commences with lassitude

<sup>1</sup> These details are from Swediaur, who seems to have mistaken the name of Bowman for that of Beaumont, and that of Hamilton for that of Haldiman (Adams, obs. on *Morb. Poisons*, p. 194).

of the limbs, and pains in the bones of the arms, thighs, and spine, which increase during the night; the voice soon becomes hoarse, and deglutition difficult; the face is flushed; the velum palati, the uvula, the tonsils, and sometimes the pharynx and larynx are red. Soon after, a species of aphthæ burst, and discharge an ichor, which erodes the neighbouring parts; small ulcers are formed, which unite and create a sore of various dimensions, but always of a round shape, of an ashy colour, and with hard, raised, and dark red edges. These ulcers, which are in some cases evolved with great rapidity, cover the uvula, the tonsils, the velum palati, and the surface of the cheeks and lips; caries affects the bones of the nose, when pus of unbearable fetidness is discharged; the voice changes more and more, and is at last entirely lost. The exostoses which had appeared from the beginning, occasionally but rarely shrink and vanish, along with the pains which accompany them, as soon as a pustular eruption is evolved upon the skin. Dr. Lambini, however, relates four cases, which prove that the pains in the bones became more violent, notwithstanding the treatment employed, and lasted throughout the whole course of the disease.

When scherlievo commences by a pustular eruption, M. Boué says that it is announced by violent itchiness, which lessens as the eruption comes to an end. The pustules are of a coppery colour, round, and of various extent. They most frequently appear on the forehead and hairy scalp, but they are also seen on the inner surface of the thighs, legs, and arms, and round the anus and genital organs. An acrid ichor sometimes flows from them, which inflames the skin; at other times this discharge dries and forms scabs; the disease often remains stationary in this state. After the scabs have fallen off, the skin retains marks of a coppery hue, which it is difficult to remove.

Scherlievo has been known to begin with various sized blotches of a coppery colour, in the centre of which ulcers are seen, from which a matter is poured out, that by drying forms scabs similar to those which cover the pustules. These blotches are generally surrounded by an areola of a coppery hue, and give the patient a most hideous aspect. It is related as a fact worthy of notice that the genital organs in women are more frequently the seat of this disease than those of men. Doctor Cambicri, among the immense number of cases which came under his notice, only found one of gonorrhœa which came on after the desiccation of the pustules of the skin, and which disappeared as soon as the eruption was restored. As for the ulcers which so frequently erode the scrotum they always appear as secondary to the general infection.

1385. *Causes*.—The transmission of scherlievo is seldom the consequence of sexual intercourse, but is the effect of simple intermediate contact; the clothes, table utensils, such as glasses, spoons, forks, napkins, &c., and an atmosphere charged with the breath of those infected, are all sufficient to sow the seeds of it. Children have been known to bring the disease with them into the world, or to have it communicated by the nurses who suckled them. It hardly ever appears by buboes in the groins, or enlargements of any of the other lymphatic glands.

1387. *Prognosis and treatment*.—When this disease appears in the form of pustules, spots or ulcers in the mouth, it yields readily to antivenereal remedies. The prognosis is more unfavourable when patients have been weakened by fruitless treatment, or by previous complaints; when the ulcers have reached, and occasioned caries of the bones, or when the patients are debauched, indulging in intemperance and neglect of personal cleanliness. The treatment of scherlievo does not, in any particular, differ from that of syphilis. I have been assured that the bichloride of mercury, given in the syrup of Cuisinier, (comp. of senna and sarsaparilla), has always proved the most effectual means of subduing it; and that, when caries had attacked the bones, the treatment might be concluded with advantage by ten or twelve mercurial frictions. Opium combined with mercury is employed with complete success against the pains in the bones. The protochloride of mercury, mixed in the cerate with which the ulcerated pustules are dressed, and the solution of corrosive sublimate diluted used as a gargle or wash to the ulcers of the mouth, always expedite the cure.

Messrs. Percy and Laurent have proposed the establishment of a Lazaretto, and the disinfection of the dwellings and clothes of the poorer classes by chemical agency, as a means of getting rid of the



disease of scherlievo entirely (Percy and Laurent. *Dict. des Sci. Méd.*, art. *Mal de Fièvre*). But if, as all seems to authorize us in believing, scherlievo be only syphilis under another name, this recommendation would require to be modified.

#### Historical Notices.

1388. Scherlievo has been particularly studied by Cambieri, Massieh, Hensler, J. P. Frank and Bagnieris, whose observations have been analyzed in a report read to the *Soc. de Méd.*, 6th Aug. 1811. (*Journal de Médecine et de Chirurgie*, t. xlii. p. 1.) M. Boué, in his inaugural dissertation, has related several cases of scherlievo (*Essai sur la maladie de scherlievo*, 4to. Paris, 1814). Eyerel has given a good description of the disease in his continuation of J. P. Frank's work, *De curandis hom. morb.* M. Amdée de Moulon has very recently published his *Nouvelles Observations sur la nature et le traitement du Scherlievo*, 8vo. Milan, 1834.

#### FACALDINE.

1389. Under this name is designated a variety of syphilis, which is said to have been introduced, in 1786, into the village of Facaldo, in the province of Bellune, bordering on the Tyrol, by a female mendicant labouring under *venereal itch*, and ulcers and warts on the vulva. The following characters are assigned to facaldine: Seabious eruption, of a syphilitic nature, which attacks adults and children, ulcers in the throat and nasal fossæ, destruction of the nose, serpiginous ulcers, which erode the skin in various directions; gummy tumours, are seldom seen; pains in the bones occur very rarely, and exostoses hardly ever. In adults blenorrhagic discharges take place from, and ulcers occur on the genital organs; buboes, and several species of exerescences, are also frequent occurrences. Cure by means of mercurial medicines.

Mareolini has related a case and given a representation of facaldine, which he considers as a variety of scherlievo. Mareolini, *Mémoire Médico-Chirurgique*. Milano, 1829, p. 18. See, besides, Zucchinielli, *Ann. Univers. di Medicina*. Milano.

#### MORBUS BRUNNO-GALLICUS (MORAVIA).

1390. An epidemic appeared in Brünn, in 1578, which in the space of two or three months, attacked forty persons in the city, and almost a hundred in the suburbs; a considerable number of the country people were also affected. This disease presented symptoms similar to those of syphilis. The disease was generally supposed to have been propagated by baths, and the practice of cupping, which is in common use among the inhabitants.

Thomas Jordan, the historian of this epidemic, thus describes its characters. "Interim insuetâ quâdam ignaviâ, seu torpore gravati: pigri, segnes, inertes ad consueta munia obeunda, animo quoque abjecto, tristes vultu, cum nec mens neque manus et pedes officium facerent, veluti umbræ, non homines, passim oberrantes conspiciabantur. Nativus faciei color in pallidum; vigor ipse oculorum in torvum, circulo fusco sicut mulieribus menstruatis deformem, subito immutatus: frons exporrectior in caperatam et nubilam degeneraverat. Manifestum tum se prodidit indicium. Vestigia cucurbitularum turgentia, extemplo ardor invasit immensus et immedicabilis, quem fedi abscessus et ulcera exsepere putrida, sanie taboque fluitantia; circum-circa pustulæ, palmum quoque latæ, achoribus floridæ, quibus dehiscentibus acu aut medicamina discissis, profluxit pituita tenuis, serosa, marcida, sanieque mucosa: aliis etiam acris et erodens: tum caro cucurbitæ ambitu circumsepta, corrosa, putrescens, tetrum ut è telephiis ac phagedænicis ulceribus invexit fœtorem. Ubi admiratione dignum initio, quod è tot affixis cucurbitis, cum alii decem plus minus, tres quoque tantum nonnulli apponi jussissent, una duntaxat, aut ad summum duæ (socrui Laurentiæ sartoris è quindecim, tres) ex iis omnibus in fœdam transiverint vomica. Nonnullis universum corpus pustulis compersum, facies informis, triste, supercilium, horrendus vultus, dorsum, pectus, abdomen, pedes, loci a summo ad imum por-

riginosa scabie, crustaceis ulceribus supra cutem paulum elevatis, duorum cruciatorum nummum, vel unguis pollicis amplitudine, ambitu rubente, candidâ superficie (ut tinea quam barbari vocant) polluta, et deturpata, cernere erat. Manabant hæc quoque pingui liquore, mucore lento, qui non pus, sed saniem referret luridam. Imò, scabie sublatâ et sanatâ, maculæ atræ, diversæque ab impetiginibus, aut vitiliginibus, plumbei et fusci coloris, remanserunt. Progressu morbi, in capite calli concrevere, qui summo cum dolore et ejullatu rupti vel dissecti, melleum quippiam, resinosum et tenax, seu ex coniferis arboribus laticem extillare videmus, lentum inquam et viseidum, marescentis pituitæ argumentum, exudabant. Abscessus hi sordidi verèque cacoëthes, postquam magnâ difficultate expurgati, et non minore carne rursus productâ, coaluissent, novum prorupit symptoma. Universi corporis artus, brachia, scapulæ, cubitus, humeri, suræ, tibiæ, pedes imi, puncturis quibusdam quasi aculeis, intensissimè vellebantur, ac si ferris discinderentur, aut forcipibus ignitis laniarentur (sic ægri sensum doloris exprimebant) potissimum ubi tibia maximè excarnis, lacertorum non fulta thoris, à solo periosteo vestitur. . . . 'Nulla tamen quies, perpetua vociferatio, lachrymæ, gemitus, indesinenter torquentibus doloribus, nocte potissimum, cum fessa membra sopore dulci reficiuntur, illis noctes pervigiles, ob cruciatum vehementiam,' &c.

Various remedies were tried for this disease; but the following method seems to have been generally successful. After having bled the plethoric patients, and exhibited some purgative medicine, decoctions of guaiacum, turpeth mineral in pills, and the expressed juices of wild endive and fumitory were administered, whilst the ulcers were dressed with mercurial ointment.

#### Historical Notices.

1391. Consult Thomas Jordan (*Brunno-gallicus, seu luis novæ in Moraviâ exorta descriptio*, Franckfort, 1577, 8vo., ibid., 1783, 8vo.); Joannis Sporischii, *tractatus*, and Cratonis *Epistolæ*, lib. ii. I have not been able to procure these last two works, which are quoted by Schenck, who has republished Jordan's memoir (Schenck, *Obs. Medicar. Rarior.*, p. 792, lib. de Brunno-Gallico).

#### AMBOYNA PUSTULE, OR AMBOYNA POX.

1392. J. Bontius (*Medicina Indorum*, 4to., Lugd. Batav., 1718; *De tophis, gummatis ac exulcerationibus endemicis in insula Amboyna ac Moluccis præcipue quas nostratas Amboyne pocken vocant*), gives the following description of a disease, endemic in the island of Amboyna.

"Endemius, seu popularis quidam morbus in Amboyna, ac Moluccis insulis præcipue oritur, qui symptomatis suis admodum similis est morbo venereo. Sed in his inter se differunt quod hic sine congressu venereo quoque nasci solet. Erumpunt in facie, brachiis, ac cruribus tophi, seu tumores, duri primum ac seirrhosi ac tam crebi per universum corpus, quam elavi ac verrucæ oriuntur in manibus ac pedibus in patria; si vero eos ulcerari contingat, materiam lentam, ac gummosam à se reddunt, attamen tam acrem, ac mordacem, ut profunda, ac cava ulcera inde oriuntur, cum labiis callosis, ac inversis; fœdum ac deformem malum, et cum luc venerea conveniens, nisi quod hic tanti doloris non adsint, nec caries in ossibus tam facile oriatur, nisi per curantis incuriam. Hic affectus originem trahit, primum ex peculiari cæli et soli istius genio; tum ex aëre, vaporibus salsis, è mari undique ascendentibus infecto; cibis præterea crassis, ac melancholicis et pituitosis, ut sunt pisces marini, quorum hic magna captura est, quibus incolæ assidue escuntur, quod reliquæ annonæ sit satis indiga regio. Magnum etiam momentum huic malo adfert usus placentarum, quas vici panis, per totum istum tractum edunt, ac ab incolis *sago* vocatur, et est è corticibus arborum excussa farina. Ad hæc confert potus importunus liquoris cujusdam saguër vocati, qui ferre eodem modo ex arbore elicitur, quo è palma indica seu coquos arbore liquor iste, quem incolæ Towac, Lusitani Vinho de Palma vocant. Hic immoderate sumptus non secus ac vinum et cervisia inebriat; caput ac nervos infestat, hinc etiam in his insulis crebrior est ista paralyseos species, quam *Berberi* supra diximus appellari. Quantum ad curem attinet, ea, si recens sit hoc malum, non ad modum difficilis est. Sin inveteratum, jam mo-



lestior est curatio. Porro iisdem forme remediis cedit, quibus lues venerea, obstructions lienis, leuco-phlegmatia, ac ipse hydrops, et ceteri chronici ac rebelles morbi. Decocta hic itaque parentur à Chinæ radice, salsparilla, Guajaco et corticibus ejusdem, quibus incoquantur anagalis aquatica, seu beccabungæ, *m. ij.* Post peccans materia vehementioribus catharticis educenda est: nam levia hic non possunt. Talia sunt extract. Guttæ cambodja, elaterium; et si his non cedit, ad chynica, et mineralia deveniendum est: ut sunt mercurius vitæ, seu butyrum antimonii, turpeth minerale, tum mercurius præcipitatus albus. Unguenta quoque mercurialia secundum artem parata hic externe adhibenda sunt."

This disease very much resembles scherlievo, which, it would seem, ought to be assimilated with syphilis.

## SIBBENS.

1394. This disease has been observed in Scotland, particularly in the counties of Ayr, Galloway, and Dumfries.

According to Gilchrist, sibbens shows itself under several forms. Sometimes inflammation of the velum palati and surrounding parts takes place, and is accompanied with a kind of white eschar, or a superficial ulcer of a bright red colour. At the same time, aphthæ or small white spots or eschars often occur on the velum palati or insides of the cheeks. Small elevations, of a pearly or milky colour, also usually appear on the commissures of the lips. Often, too, a very small excrescence or *fleshy growth* is developed, resembling a raspberry, and which becomes covered with a scab. This growth is almost a certain indication of the disease, even when the sore throat does not exist. Dr. Trotter, who has also described this affection of the mouth, compares its appearance to that of toasted cheese.

Another form of this disease is that of destructive ulceration, which may cause the entire loss of the velum palati, and the death, from inanition, of infants at the breast, deglutition becoming impossible.

Sibbens appears in other cases on the skin, and under different aspects. Sometimes the whole surface of the body is spotted, and clouded with a coppery and dusky red blush. At other times, clusters of pustules appear, over which several successive desquamations of the epidermis take place. *Scabby eruptions* of the hairy scalp, forehead, inner sides of the thighs, &c., are accompanied with little hard lumps, in the thickness of the skin, and a feeling of unpleasant itchiness. At other times, a species of tumour, similar to furuncles, are seen on the arms, shoulders, face, legs and feet, which give rise to ulcers that perforate the whole thickness of the skin, and lay bare the muscles, which they sometimes also corrode. Adams is disposed to believe that these ulcers are the result of the immediate contact of the virulent matter proper to this disease.

Finally, the soft and spongy *raspberry tumours*, which have been mentioned (whence the name of *sibbens* or *sivvens*, which is derived from *sibbens frambæsia*), are the last symptoms of the disease; they do not seem to occur in all places alike, for several other forms of the disease are observed, several, indeed, which Gilchrist himself had never seen.

According to the same observer, the bones are not affected in this disease; Bell, on the contrary, speaks of *nodes* and *caries*.

1396. Sibbens is rarely communicated by sexual intercourse; the alterations which are sometimes seen in the genital organs take place consecutively. The disease is more frequently transmitted by nursing, and the common use of the same utensils, the use of the same pipe, for instance.

The silence of cotemporary writers on this disease leads me to imagine that it is now extinct.

The treatment adopted for sibbens, bears the greatest resemblance to that employed in syphilis.

*Historical Notices.*

1396. Since the publication of Doctor Gilchrist's paper (*An account of an infectious distemper prevailing in many places, &c.* Essays and Observ. Physic. and Literary, by a Society in Edinburgh, vol. iii. p. 154), Doctor Adam Freer has treated of sibbens, which he believed

to be produced by an insect similar to acarus, in an appendix to his inaugural treatise (*De syphilitide venerea*). Adams gives an account of several additional researches made by Doctors Hope and Barry, and particularly by Dr. Hill. Adams made a journey to Scotland himself, expressly to study this disease, and gives several cases of it (*Observat. on Morbid Poisons*, p. 176, 4to. Lond., 1807).

## PIAN DE NÉRAC,

(*Département de Lot et Garonne.*)

1397. Raulin has described an epidemic disease which seemed to be analogous to scherlievo and facaldine, under the objectionable name of *Pian de Nérac*.

"At the end of the month of June 1752, a singular epidemic disease appeared at Nérac; it was a species of lepra or frambæsia (*pian*), similar to that which affects the negroes in the Gulf of Mexico. It spreads among children at the breast; those affected by it begin to fall off; by degrees pustules appear on the face, mouth, neck, buttocks, and thighs. Nurses contract this eruption on the breasts, and it afterwards appears over the whole body. The pustules are generally round, hard, and rather callous; from some of them, a yellowish ichor is discharged; others are covered with a pulverulent crust; these pustules, covering the body, become confluent, and appear to form only a single incrustation; they degenerate into deep ulcers which lay bare the bones, and occasion death; towards the end of December it was calculated that more than forty infants had already been affected with this disease. The treatment that was most successful was the use of an ointment, made with one ounce of pure mercury, rubbed till the globules had disappeared in Venice turpentine, one ounce of lard, and one scruple of camphor, well mixed together. Mercurial frictions were tried upon several women, but mercury without camphor was often ineffectual. Children were cured in a fortnight, but it was necessary to continue the treatment for several days afterwards. The origin and cause of this disease were entirely unknown."

## FRAMBÆSIA OR YAWS (PIAN FRENCH).

1398. The identity of *yaws* and *pian* seems to be demonstrated, although some differences appear in the exposition of the symptoms of the two diseases, given by the English observers who have studied *yaws* in Guinea and in Jamaica, and by the French physicians who have observed *pian* in Saint Domingo, Guadaloupe, Brazil, Jamaica, &c.: these differences, however, seem at the most but to characterize two varieties of the same affection.

1399. Yaws begin by a state of languor and weakness; with pains in the joints, and in most cases with fever, which runs highest among children. Before the eruption, the skin is often covered with a white dust (Thomson), as though it had been powdered. Some days afterwards spots similar to flea bites or small papulæ appear on the skin, particularly on the forehead (Thomson). These elevations increase in size during from six to ten days; at the end of this time, a scab is formed on their top, from under the edge of which a crude purulent matter is discharged.

The size of the pustules still increases, and they become covered with irregular scabs not very adherent. Many of these pustules acquire the size of a shilling. On raising the scab an ulcer of a bad or gangrenous description is discovered. It does not assume the fungous appearance which it ultimately acquires, at any definite period of the disease; this sometimes occurs a month after the breaking out of the eruption, and sometimes three months afterwards; the development of these fungous growths seems to depend very much on the constitution of patients, taking place earlier in those who are lusty and well fed. A second eruption sometimes makes its appearance preceded by fever, the progress of which is the same as of that which has gone before it, so that the eruption may occasionally be seen in different states in the same individual. The elevations are broader and more numerous on the face, groins, axillæ, verge of the anus, and labia majora than on any other part of the body. New eruptions take place as soon as the first begin to dry off, so that after these



successive eruptions, the number of pustules existing together is sometimes very considerable. If the writers who have studied this disease are to be credited, there is always one pustule larger and more raised than the others, which it is more difficult to cure, and which is designated by the name of the *mother yaw*.

This affection is said to be sometimes accompanied with nocturnal pains and swelling of the bones, ulcers in the pharynx, &c. In this last case the disease becomes very distressing; the ulcers of the throat resemble toasted cheese; they never become fungous, and a great part of the palate is very apt to be destroyed by them.

The fungus of frambæsia, in patients of a good constitution, is red, like a piece of flesh; in delicate or diseased subjects, it is white like a piece of cauliflower; it bleeds on the slightest touch; in the latter case it is less raised than in the former. After having continued some time in this state, the fungus gradually diminishes in dimensions and in height, shrinking and generally disappearing without leaving any scar, except in places where the inflammation has been very great (Thomson). The cicatrices that then result resemble those of cow-pox, only they are larger and more superficial.

In the successive eruptions of yaws, there is often one pustule which does not heal like the rest; left to itself it is apt to produce caries of the neighbouring bones.

Yaws appear under a different aspect in cachectic persons: the pustules are smaller, the eruption which is less copious is successive; the fungous growths which usually characterize the disease either do not exist at all, or are very small and watery.

The length of time during which this disease continues is uncertain; in some patients it lasts six months, in others a year; in general, its term may be stated at about eight months. Fever and the symptoms generally, are mostly very well marked in weakly and ill fed children.

1400. *Causes*.—We are informed that frambæsia usually occurs among the ill fed negroes, whose skin is continually irritated by a burning sun, by the bites of insects, and by the rancid oils with which they are in the habit of anointing their bodies. This disease is contagious, is transmitted by the union of the sexes, by suckling or by the application of the matter of the pustules or cutaneous ulcers to any part of the excoriated skin; perhaps it is also transmitted in still other ways.

It is difficult to determine the time of incubation. Thomson relates that a certain number of negroes in good health were sent with their children to a sugar farm in a mountainous district, and the healthy children having eaten and drunk with those at the farm who were affected with yaws, three of the former were, seven weeks afterwards, attacked with fever and pains followed by a general eruption; the others were not affected until three weeks later; at the end of eight months all were cured. Thomson inoculated a child in five places with the matter of an ulcer from which the scab had been removed. Three of the punctures healed; the two others looked like simple scratches during three weeks, when they formed into small ulcers, which spread until they had assumed a gangrenous appearance with jagged edges, &c. Seven weeks afterwards papulæ appeared on the forehead, and by and by extended over the whole body; the fungus now formed; the patient had an abundant eruption which lasted nine months. The two ulcers which followed the punctures never became fungous, but they left deep scars. Thomson relates that variolous matter having been taken from a little negress affected with yaws, the child who was inoculated with this pus had the small-pox in a very mild form, and was afterwards attacked with yaws. The blood of a negro covered with yaws, was inoculated upon four children in five different places without producing the disease.

The usual progress of cow-pox, small-pox and varicella is not impeded by the existence of yaws.

The matter of yaws has not been found to occasion any eruption in rabbits or dogs, even after repeated inoculations.

The disease can only be communicated once to the human subject. A woman, however, who suckles a child affected with yaws may have the breast excoriated; death has even been known to follow this circumstance: phagedenic ulceration of the breasts which extended to the axillæ and was accompanied with great irritation, took place and proved fatal.

If a person affected with an ulcer of considerable size, contracts yaws, it may happen that this ulcer continues and presents the granulated aspect characteristic of yaws without the eruption appearing. If this ulcer be healed, an eruption similar to that which occurs in the usual course of the malady is developed; left to itself the ulcer gets into a progressively worse and worse condition.

1401. *Diagnosis*.—Thomson says, that an old Scotch physician, who had long been familiar with yaws in Jamaica, was struck, on his return to Scotland, with the identity of sibbens and this disease in most of their phenomena. (a)

Yaws is regarded by some writers as a modification of syphilis, by others as a peculiar disease of the skin. (b)

1402. *Treatment*.—According to Thomson the usual practice in the island of Jamaica is to leave the disease to the efforts of nature. Good food is recommended, and moderate work; sulphur, a decoction of the sudorific woods, and antimonial preparations, are exhibited in the cases of children with success. A great many diseases are generally attributed to the *dregs* of yaws. Thomson thinks that the number of these has been greatly exaggerated.

Finally, Thomson is convinced that though mercurial preparations may cause the symptoms to disappear in the course of a month, they generally reappear at a later period, and with greater violence than before. Hunter had already declared against the use of mercury in frambæsia.

1403. The description given of *pian* by the French physicians who have seen it in St. Domingo, Guadaloupe, Cayenne, &c., differs in

(a) Dr. Kerr (*Cyclopædia of Pract. Med.*, art. *Yaws*), establishes the diagnosis between the latter (frambæsia) and sibbens or sivvens, in the following terms. "The identity of many of the phenomena, as well as of the original signification of the names of the disease under our consideration, with sivvens or sibbens, (sibbens in the Erse dialect signifies a raspberry,) a malady well known in the western parts of Scotland, renders it a matter of interest, if not of importance, that we should notice their characteristic distinctions. The sivvens, it is remarked, at first seizes the throat and nose; the yaws never, until after a length of time or improper treatment. The eruptions in sivvens are watery, of a dirty hue, and of intolerable fætor; those of the yaws are at first as small as a pin's head, hard, and without any peculiar odour. In sivvens boils appear here and there, forming deep and ill-disposed ulcers, a character which does not belong to yaws. In sivvens itchy tetters break out in form of ringworms, and occasion either a deep ulcer or a scabby large spot with inflammation; the yaws have no such appearances. The sivvens rarely affect the bones, the yaws always unless well managed. In the yaws the excrescences succeed the pimples as well on the face and body as on the axillæ and pudenda; in sivvens the fungi appear on the groin and perineum in a very advanced stage of the disease. The sivvens is highly contagious without sensible inoculation, the only mode, as it appears, by which yaws is propagated. The sivvens may be cured early by mercurials, but mercurials in the yaws, at least in the early stage, are pernicious. In constitutions otherwise healthy the yaws will usually run a definite course, be spontaneously exhausted, and terminate in health even without medicine; but if speedy and effectual means be not used to counteract sivvens, it will almost certainly proceed to a fatal issue."

(b) The distinction between yaws and syphilis is drawn by Dr. Kerr in the work just referred to. "The yaws and syphilis have frequently been considered as modifications of the same disease, but a comparison between the descriptions of the two will at once establish some important distinctions. It is true that the yaws will affect the bones, the cartilages of the nose, and the palate, like syphilis, and will admit of cure by similar means; but in primary syphilis neither eruptions nor fungi appear as in the yaws, except on the pudenda, and then only in the form of warts. Syphilis will never cease spontaneously, (c) like yaws, and, unlike yaws, it may be and is contracted repeatedly. Persons who are suffering from the yaws may contract gonorrhœa, and even syphilis; and it is very remarkable that the former may be cured independently of the yaws, but that the latter cannot until the yaws have begun to decline."

(c) This averment is not sustained by the history of syphilis.



several respects from that which I have just sketched from the works of the English physicians who have studied this disease in the West Indies, and particularly in Jamaica. I shall, therefore, add a short abstract of the descriptions and opinions of the French physicians in the colonies.

*Pian* is announced by small red spots which appear on different parts of the body; the patient at the same time experiences a slight degree of fever, pains in the limbs, and even in the bones; the skin becomes scaly; the patient becomes sensibly thinner. By degrees the intensity of these symptoms decreases, the eruption is developed, and shows itself under three aspects: 1st, *large pians*, or *white pians*; 2d, *small pians*; 3d, *red pians*. The first, of great size, sometimes as large as the hand, are formed of fungous flesh, from which a thick sanious matter exudes. The small pians, less in size than the former, are much more numerous; their excrescences are redder and less fungous. The *red pians*, larger than the latter, less than the former, round, and of a more marked flesh colour, developed slowly and successively, are accompanied and followed by much more serious symptoms than those of the other two species, particularly than the first, which is the mildest of all.

One of the pustules of *pian* generally becomes larger than any of the others, and takes the form of a deep ulcer of bad character, but without fungi, from whence a sanious matter is discharged. If this ulcer is dressed with the usual remedies, it becomes irritable, and assumes a worse appearance than it had before. This ulcer is called the *mother pian*. It is dangerous to attempt to dry it up, or to effect its cicatrization before the symptoms of the general infection are manifested. If a patient have an ulcer on any part of the body, the first pustules are generally developed upon it, and the ulcer itself sometimes becomes the *mother pian*.

Several affections have been attached to the pianic eruption, as consecutive diseases: 1st, *guignes*, a species of excrescence which principally appears on the soles of the feet, palms of the hands, and tips of the fingers, which are so tender to the touch that the patients can neither walk nor lay hold of any thing without experiencing the greatest pain. 2d, certain whitish excrescences on the soles of the feet, named *crabs* from their shape, from which a purulent matter is discharged. 3d, *Saouaouas*, considerable thickenings of the skin of the soles of the feet, and of the insides of the hands; they are red, acutely sensible, and very painful in walking, without any exudation, but with simple increase and hardening of the parts. After *pian*, an affection of the bones, entitled *mal aux os* or bone evil, occurs, characterized by wandering pains in the bones, generally by the tumefaction of those that are spongy, and of the extremities of long bones, by exostoses, softening, caries, &c. These, as may be imagined, are serious symptoms, and being accompanied by the formation of numerous ulcers, often reduce patients to a horrible state. (a)

1404. Chopitré, Dazille, &c., think that mercurial preparations, frictions of mercurial ointment, the internal use of the bichloride of mercury, diluents of sarsaparilla, and guaiacum are the best remedies for *pian*. The diet should be mild and succulent; broths made from turtle, crabs, fresh vegetables, and white meats are recommended.

1405. To conclude, in studying the documents published by the English and French physicians comparatively, it will be seen that the former have carefully described the elevations, pustules, scabs, and ulcers which precede the *fungus of frambæsia*, and that the latter have exclusively confined themselves to this latter appearance, and to several consecutive lesions (*guignes*, *crabs*, *saouaouas*, *bone evil*), which the English writers hardly mention. Besides, most of the latter think that yaws only attack the same individual once during the course of his life, whilst the French physicians maintain the contrary, with regard to *pian*. Hunter and Thomson assure us that mercury is detrimental, whilst the French physicians recommend it as the most efficacious remedy. Notwithstanding this diversity of opinion, yaws and *pian* are generally regarded as the same disease. Sauvages, Lorry, and Sprengel, however, are agreed in considering them as distinct from each other.

1406. *Frambæsia* differs from syphilis in several of its characters,

(a) *Pian* or yaws is represented to be a common precursor of leprosy in Brazil.

its progress, the time it lasts, the inefficacy of mercury in its cure, and above all, the constantly fungiform aspect of the ulcers. This latter appearance has been observed in some scrofulous ulcers, but they presented other distinct characters. (Martin. *Obs. d'un ulcère scrofuleux simulant le frambæsia*.—Bulletin des sc. médicales, t. vii. p. 217.)

#### Historical Notices.

1407. Yaws have been observed in Brazil, by Piso (*De medicina Brasiliæ*, lib. ii. chap. 9, 1643, in fol.); in America, by Labat (*Nouveau voyage en Amérique*, 1722, 6 vols. in 12); in Africa, by Winterbottom (*Account of the native Africans of Sierra-Leone*, vol. ii. chap. 8); by Hume (John) (*A description of the African distemper called the Yaws*, &c., Medic. Essays and Obs. by a society in Edinburgh, vol. v. pt. ii. p. 87); and by Bancroft (*An Essay on the Natural History of Guiana*, in 8vo. London, 1769); in Jamaica, by J. Thomson (*Obs. and Experiments on the Nature of the Morbid Poison called Yaws*, &c., Edin. Med. and Surg. Journ., v. xv. p. 321; and *Remarks on Tropical Diseases*, ibid., v. xviii. p. 31); in Barbadoes, by Hillary (*Obs. on the changes of the air and the concomitant epidemical diseases in the Island of Barbadoes*. London, 1759, in 8vo.); in St. Domingo, and in Cayenne, by Bajou (*Mémoire pour servir à l'histoire de Cayenne et de la Guiane*. Paris, 1777, 1778); in St. Domingo, by Dazille (*Obs. sur les maladies des nègres*, in 8vo. 2 vols. Paris, 1742); and Chopitré (*Aperçu sur le pian et sur les maladies dont il est suivi*, in 4to. Paris, 1804). Bern. Peyrilhe may also be consulted (*Précis théorique et pratique sur le pian et la maladie d'Amboine*, in 8vo. Paris, 1783); as also Gomez (B. A.) (*Mem. de l'Académie Royale des Sciences de Lisbonne*, t. iv. p. i.); and Arthaud (*Traité des pians au Cap François*, in 4to. 1776). Sprengel is decided in separating yaws from *pian* (*Beitrag zur Geschichte der Medizin*, Stuck, 3); see also several papers inserted in the *Edin. Med. and Surg. Journal*. (a)

### FIFTH GROUP.

#### PELLAGROUS DISEASES.

This group comprises pellagra and some squamous diseases.

#### PELLAGRA.

1408. Pellagra, *dermotagra*, *colore del fegato*, *male della spienza*, *mal de misère*, *scorbuto*, *alpino*, &c., is a disease peculiar to certain parts of Italy, reappearing in an aggravated form every spring, characterized by chronic inflammation of the skin of an exanthematous and squamous description, confined to the parts exposed to the sun, preceded, and often accompanied with very serious functional derangements of the digestive organs, and of the cerebro-spinal axis.

1409. *Symptoms*. (*Slight Pellagra*). Pellagra is often preceded by lassitude, uneasiness, ennui, dislike to all kinds of occupation, and less frequently by nausea and vomiting. Some patients also experience vertigo, and pains in the head: but pellagra generally shows itself without precursory symptoms.

This disease most commonly appears first on the back of the hands and feet, on the chest, throat, nape of the neck, arms and legs of

(a) M. Sigaud (*Du Climat et des Maladies du Brésil*), in his account of *pian* (*frambæsia*), refers to B. M. Gomès (*Ensaí dermosographico*, Lisbon, 1820), J. V. Couto and J. Alvès Carneiro (*Revista medica fluminense*, 1833), and J. A. Carneiro (*Memoria sobre as bobas*), among Portuguese writers on *pian*, called, also, *boubas* of Brazil. It is described in that country as found in three species; the moist, the dry and the crystalline.



persons whose clothes do not cover these parts. The face is seldom attacked.

The eruption of pellagra presents three principal forms: in the first the back of the hands, the fingers, and feet become the seat of a sensation of heat, smarting or unpleasant pricking which exposure to the sun renders insupportable. These parts redden; this redness is sometimes pretty deep, at others paler, or livid, brownish or dusky; some time afterwards the epidermis splits, is detached and falls off in the form of squamæ, leaving the subjacent skin, which is reddish, shining, and rather swelled and rough, quite bare. In the second variety, this inflammation is sometimes still more intense; the epidermis is raised in vesicles, or more frequently in large irregular bullæ, formed of a yellowish or reddish serum, which produces slight scabs in drying; excoriations and slight cracks are also sometimes, though very rarely, seen in this case. Thirdly, the epidermis thickens, undergoes change, becomes yellowish, brownish or blackish, dry and often hard, and scaly like the bodies of certain fish, without the skin smarting or becoming red.

The morbid appearances of the skin are not at first very marked, and patients pay little attention to what is passing, considering all as the simple effect of exposure to the sun. In fact it almost always only requires the parts affected to be kept covered, for them to recover their natural appearance, and indeed the alterations all disappear spontaneously towards the end of summer, but reappear in the spring with fresh intensity, to vanish again, at least in great part, during the autumn.

The patient may thus continue for a great number of years, to present symptoms of a local affection, disappearing in the winter, and reappearing in the summer, without any functional disturbance worth noticing. General symptoms and disorder of the digestive organs sometimes also happen along with the cutaneous affection; a foul tongue, often red at the edges or point, heat in the mouth and throat, thirst, more or less pain in the epigastrium, loss of appetite, or an irregular and excessive appetite, nausea, sometimes vomiting, bad digestion, eructations, abdominal pains, either spontaneous or experienced on pressure, and diarrhœa or obstinate constipation of the bowels.

The *nervous system* frequently appears affected in a no less remarkable manner. Some patients are much dejected, take a disgust to their former occupation, and suffer from vertigo, giddiness, and pains in the head. These symptoms are in general aggravated in the same degree as the alterations of the skin make progress.

1410. But pellagra may appear in a totally irregular manner instead of following this even tenour, and progressive increase in its symptoms. Serious symptoms, mostly *secondary*, occasionally occur without the skin being visibly, or, indeed, in any way affected; sometimes, again, they take place only a very short time after the appearance of the cutaneous affection. These anomalies are more particularly observed in individuals born of parents who have died labouring under pellagra. Pellagra is occasionally seen to commence by *desquamation of the lips*, accompanied by great heat of the mouth, and ardor urinæ. Boërio has several times seen periodical *ophthalmia* appearing in the spring, followed by very severe and acute pellagra; he makes the same remark with respect to some periodical *rheumatisms*, which he has known to appear in the spring, in persons whose parents had suffered from pellagra; he has also seen several of the *neuroses*, such as hysteria and hypochondria, &c., occur at this season, in many individuals in countries where pellagra was endemic, the external characters of this disease appearing at a later period.

1411. *Severe Pellagra*.—Pellagra often shows itself under more serious forms; and then the digestive and cerebro-spinal organs are deranged to a much greater degree, and other systems, and the constitution itself, are more or less deeply implicated.

In these *severe varieties* of pellagra, the lips become pale and livid, dry and cracked; the nostrils inflamed; the gums red, swollen and bleeding (scorbuto alpino); the saliva flows abundantly from the mouth, and acquires a salt taste (salsadina); the tongue becomes red, sometimes brownish, and presents ulcers and cracks; the mouth is painful, and there is a feeling of heat complained of in it which extends to the throat. Other symptoms are also observed: aphthæ, excessive thirst, pains in the pit of the stomach, nausea, vomiting of

greenish or yellowish fluids, abdominal pains, liquid-greenish, yellowish, or grayish, and occasionally, though rarely, blackish evacuations, from the bowels, immediately after drinking or taking food, generally without pain, and still less frequently with *tormina*, tenesmus, &c.

The *nervous system* presents phenomena no less remarkable. Patients are habitually in a state of the greatest dejection; their look is sombre and melancholy; their sight is disordered; they see things double; they are subject to giddiness or vertigo, to numbness, singing, and noises in the ears, and experience the most singular hallucinations. They complain of feeling a heat in the head and spinal marrow, of tingling and darting along its course, and that of the nerves which proceed from it, of pains in the chest, in the belly and in the organs of the senses, which seem to them to be traversed from time to time by the electric spark. Besides this, they have a feeling of heat in the limbs, in the palms of the hands, and particularly in the soles of the feet, very painful at times, and less frequently replaced by a sensation of coldness.

These pains sometimes only affect one side of the body. Some patients suffer from distressing cramps; and Strambio has seen a case of tetanic spasm of the whole body. Irregular muscular contractions are more frequently observed (*Saint Vitus's dance*, *general trembling*); continual motion of the lips; involuntary movements of the head and body forwards; convulsions, and sometimes epileptic fits.

A general prostration of strength is also seen without any other serious symptom; a great degree of debility in the limbs, particularly of the legs, with a feeling of weakness at the bottom of the back, to such an extent that the patients tremble when they stand up, and are sometimes even incapable of supporting themselves seated in their beds. Finally, true *contractions* of the lower limbs, by which the feet are drawn up to the buttocks, have occasionally been observed; anæsthesia and paralysis of the bladder sometimes take place.

Pellagrous subjects often present all these symptoms, particularly the nervous pains and cramps, without being affected with delirium. This delirium is of two descriptions: *acute* and *chronic*. The first, which may prove fatal in a few days, is accompanied with a hard and full pulse. Some patients are melancholy, refuse to eat or drink, or answer any questions which are put to them; others are boisterous and cry out; some are even furious; the greatest number in moving their heads backwards and forwards, imitate the sound of bells (Strambio). This acute delirium does not occur in the first stages of the disease.

1412. The *chronic delirium*, or *pellagrous mania* appears under several forms; one of them is a sort of madness; another is a loss of memory (amnesia), and of the faculty of attention; a third and much more common one, is religious melancholy, with the desire to destroy themselves, particularly by drowning (*hydromania*), (Strambio): this chronic delirium is most frequently incurable; sometimes, however, it is cured after lasting many years. In the hospitals for the insane in certain countries in Italy, pellagrous mania forms a considerable proportion of the cases.

Strambio mentions cough as a frequent symptom among the pellagrous. He believes in the existence of a pulmonary phthisis of *pellagrous* origin.

The menstrual flux is generally suppressed in women on the appearance of the serious symptoms of pellagra. Besides this the organs of generation often become the seat of inflammation and excoriation, which extend to the surrounding parts, and are kept up by a considerable whitish or yellowish discharge from the vagina. In men pains in the bladder, and great heat of the urine occur.

Persons affected with pellagra are observed to have a very slow pulse (thirty pulsations in a minute) (Strambio), before the development of gastro-intestinal inflammation. Two descriptions of fever are also observed in pellagrous subjects; in the one there is a strong, hard and unequal pulse, with prostration of strength and great heat of skin; the tongue is dry, red, blackish, the lips dry, and the teeth black; gangrene of the sacrum, picking at the bed-clothes, and other symptoms analogous to those which are observed in the acute dothi-enteritis, also occur, &c. This species of fever is constantly fatal. In another species, which, according to Strambio, is more connected than the former with the cause of the disease, and probably with the



internal lesions which accompany it, the fever continues with irregular exacerbations. The pulse is frequent and hard, with heat of skin, followed by a sweating of a particular odour, and which does not afford any relief. This species of fever is tedious, and reduces patients to such a degree as is seldom seen in other chronic diseases: they become like real mummies, and die consumed with the most horrible of all consumptions.

In other cases *anasarca* and *ascites* have been observed; these symptoms occur rarely in the first stages of the disease, but pretty frequently towards its termination. Spontaneous ecchymosis of the skin is also sometimes seen, a phenomenon which, with the swelling of the gums, has induced many to give pellagra the name of *Alpine scurvy*.

1413. Strambio has seen acute febrile delirium disappear after profuse sweats over the whole body. The sweating which occurs in hectic fever does not, on the contrary, afford any alleviation, but rather reduces the strength of the patient. Apyretic local sweating, particularly of the palms of the hands and soles of the feet, is often followed by an abatement of these symptoms (Strambio). The matter perspired, particularly in the fever with acute delirium, is of a very fetid and peculiar smell: Strambio compares it to that of the larvæ of the silk worm, steeped in water, and half putrid; Jansen thought it similar to that of mouldy bread.

Pellagra is always aggravated by the return of spring, when the patients remain under the influence of the causes which produced the disease; profuse secretion of saliva with a salt taste, is added to the eruption on the skin, accompanied with heat of the mouth, diarrhoea, &c. Dejection is changed to *melancholy*, and acute delirium supervenes, or otherwise various nervous symptoms, pains, cramps, trembling, &c., make their appearance.

These last symptoms increase, becoming continually more and more violent; fever is lighted up, the diarrhoea becomes colliquative and involuntary, and death takes place, preceded by spasmodic stiffness or convulsions of the muscles, &c.

1414. Some anomalies have been observed in the nature, progress and succession of the symptoms of pellagra. During its first ravages in Italy, this disease was remarkable for the intensity of its nervous symptoms, cramps, spinal pains, &c., and the trifling development of the cutaneous phenomena. At a later period, alterations of the skin became very prominent features of the disease, whilst affections of the digestive organs, and mania occurred only as *secondary* symptoms. Different symptoms have also been known to predominate; in certain years ptialism was very common, while in others it was not observed, or was replaced by heat in the mouth, aphthæ, and an extremely disagreeable desquamation of the lips. Very recently, the various nervous symptoms, cramps, spinal pains, &c., on which former writers expatiate at such length, have been very little noticed, while pellagrous mania is spoken of as very common, and gastro-intestinal lesions as habitual.

These symptoms have been known to declare themselves during winter, and to be the forerunners of pellagra, which did not appear till the spring. Pellagra has also been known to occur in a mild winter (1796), and to prevail longer than usual.

1415. Pellagra may be complicated with other diseases of the skin, such as lepra, psoriasis, pityriasis, lichen, erysipelas, urticaria, prurigo, acne, eczema, purpura, syphilis, &c. The spots of *ephelis* which have been remarked on the forehead are, perhaps, an alteration of the epidermis similar to that which is seen in other parts of the body in pellagra. Other diseases, such as intermittent fever, scrofulous affections, white swellings, peritonitis, phthisis, &c., may be complicated with pellagra.

1416. *Anatomical researches.*—Gaetano Strambio sometimes found lesions in the head, at other times in the chest, and always in the abdomen of pellagrous subjects. Several of these lesions were probably accidental. I have remarked in these *post-mortem* examinations, the frequency of local or general peritonitis either recent or of older date, and of bronchitis and pulmonary tubercles. Fantonetti has given a detail of the morbid alterations found in the body of a woman who had been affected with pellagra for twelve years. This patient had often been insane, and in the last stage of her disease became paralytic; she died labouring under *dementia*, and in a state of *maras-*

*mus*. The skin of the back of the hands and feet was like *leather*; this alteration extended to the whole thickness of the skin; examined with the lens, it presented a great number of irregular cracks, very close together, crossing at acute angles, and sometimes implicating the whole thickness of the corion. At the edges of some of these cracks there were small, thin, yellow crusts. Between the cracks, furfuraceous lamellæ of a dirty white, adhering very firmly, and of an irregular form, were seen. The epidermis was six or eight times thicker than usual, brownish, cracking, friable, and dry, and could not be readily detached from the skin; the sub-epidermic layers were everywhere of a most singular appearance, and, once or twice, as thick again as in their natural state.

The cutaneous branch of the radial nerve when laid bare, seemed a little larger than usual; on being divided, serum flowed from it; its pulp was reddish and of soft consistence. The membranes of the brain were injected with black blood. The dura-mater adhered very closely to the right parietal bone; the pia-mater adhered to the cerebral convolutions, in which a slight degree of atrophy had taken place; the substance of the brain was in general rather softer than usual; there were about two ounces of serum in the ventricles; the cerebellum was slightly injected and rather softer than in its natural state; the spinal marrow was very soft and pulpy; its membranes looked thinner than common, and contained a great quantity of serum.

M. Brierre de Boismont has carefully examined the bodies of five individuals who had died of pellagrous affections. "The result," says he, "of our researches is that lesions always occur in the digestive organs; the mucous membrane of the stomach is often red, intersected with bluish or brownish vessels, soft, pultaceous, or easily removed with the nail. The redness may be confined to the great end of the stomach, or at least appear more marked in this region; it is sometimes of a uniform red colour, sometimes of a brownish red, and sometimes bordering upon gray. The mucous membrane may farther be thinner, though in other cases it also occurs thicker than natural. The stomach, again, is sometimes distended and presents no alteration, but the redness is then found in the intestines. The valves of the duodenum partake of this colour; the mucous membrane of the small intestines, and those of the great, are generally coloured red of a lighter or darker tint, and sometimes brown. Hypertrophy and softening ought to be classed among the number of the lesions of the mucous membrane. Ulcers are common; they may be irregular, round, numerous, surrounded by an inflamed tissue, or one quite white. The subjacent cellular tissue and the muscular coat have been found hypertrophied. In the five subjects that we opened, the intestines contained lumbrici. Dr. Carswell has met with a large perforation arising from the softening of the stomach, in two individuals in whom there had been evident symptoms of chronic irritation of the digestive organs; and in other parts the mucous membrane showed unequivocal traces of chronic inflammation."

The nervous system presents alterations no less evident. The membranes of the brain, particularly the tunica arachnoides and pia-mater, are injected, infiltrated, adherent, thickened, and opalescent; the consistence of the brain is sometimes increased, the gray substance is more deeply coloured, fuller of blood, the white substance is gritty [*sablée*], and dotted; there is generally no serum in the ventricles. It is not uncommon to find the bones thickened, and a considerable quantity of blood at the base of the cranium. The lesions of the spinal marrow are also very remarkable; the membranes, and particularly the arachnoid and the pia-mater, are red, the vessels gorged with blood; a frothy serum has sometimes been seen. The gray substance is almost always hard to the touch, and injected; the white, on the contrary, is soft, reduced to a pap or cream, along a greater or less extent, and infiltrated with pus; its colour is commonly a yellowish or dirty gray.

1417. *Causes.*—Pellagra is endemical in certain parts of Italy and Spain; particularly in the environs of Milan, Pavia, Padua and in Piedmont, &c. It is not contagious. It is confined almost exclusively to the country among labourers, herdsmen, &c., is more frequent among women than men, and more frequent in full-grown persons than in young people and the aged. It is supposed that nervous, hypochondriacal, hysterical or melancholy persons, particularly those who have been weakened by privations, the depressing passions,



excesses, or any previous disease, are more liable to be affected by pellagra than the generality of individuals. It has also been remarked that the children of pellagrous parents bring a peculiar disposition to this disease into the world with them, which generally passes as hereditary. Pellagra has been attributed to the use of maize (Margari), to the abuse of common salt (Guereschi), to the habitual use of sour rye bread, or the want of good water in several parts; to dirty and ill ventilated dwellings (Aglietti), to fatigue and bad food, to depressing passions and misery among the unhappy peasantry, &c. The influence of exposure to the sun upon the production of the cutaneous affection in pellagra is incontestable; ever since pellagra has been observed, it has been well known that the eruption could be excited or caused to disappear at will in pellagrous subjects, by merely exposing various parts of the body to, or covering them from, the light of the sun. M. Aug. Spessa attributes pellagra to the habit which the poorer inhabitants of some parts of Italy have of passing the evenings, and sometimes part of the day, in winter, in their dirty and unhealthy cow-houses, by way of escaping from the cold. He is persuaded that pellagra is not endemic in countries where this habit does not exist; that where it is endemic it is only seen among those who inhabit stables; finally, he adds, that pellagra has only attracted the attention of physicians since 1770, an epoch when fire-wood had already become exceedingly scarce in countries where this disease prevails. M. Spessa seems to think, besides, that exposure to the sun is the *occasional* cause of this disease.

1418. *Diagnosis*—Pellagra is distinguished from acute erythema inasmuch as the latter, which may appear on any part of the body whether covered with the clothes or not, shows itself not only in the spring but at all other seasons, and generally terminates after continuing for a week or two. As to *chronic* erythema, it is never accompanied by serious symptoms, and the lesions of the digestive organs and nervous system which are observed in pellagra. These general symptoms, when they exist, also distinguish pellagra sufficiently from lepra, to prevent any mistake; the prominent rings of lepra, besides, covered with squamæ, heal from the centre, and appear indiscriminately on parts either covered with clothing or not. This absence of general symptoms is also remarked in psoriasis, the white and pearly squamæ of which differ from the generally embrowned state of the epidermis in pellagra.

*Pityriasis rubra*, in a severe form, has more analogy with pellagra, on account of the gastro-intestinal symptoms which sometimes accompany it during its course; but it differs from pellagra in never being accompanied with secondary lesions of the nervous system, and in the eruption being general.

Of all the diseases seen in France, the epidemic which prevailed in Paris and its neighbourhood, in 1828 (acrodynia), is, without exception, the one which bears the greatest resemblance to pellagra. In fact, as in pellagra, from the commencement of the disease, redness varying in tint from bright to dark red, was commonly seen on the feet and hands, less frequently on the legs, and more rarely still on other parts of the body; vesicles and bullæ also accompanied this first form of the eruption, and at other times the skin assumed a brown or blackish hue, particularly on the belly, neck and about the joints, a hue produced by an alteration of the epidermis, which falls off at a later period. Profuse, irregular, periodical *local sweats* also occurred in acrodynia as in pellegra. Disorder of the digestive functions, characterized in some by simple loss of appetite, and a feeling of fullness and weight in the stomach, in others by nausea or vomitings, particularly after taking food or drink, by colic, and very frequently by a diarrhœa of longer or shorter duration, were almost always superadded to the other symptoms of acrodynia either in the commencement of this affection, or at some period during its course. As in pellagra, too, a sense of numbness, and of tingling, and occasionally smart shooting pains were felt in the hands and feet, extending sometimes along the legs, thighs or arms to the trunk, and even to the hairy scalp; the sense of touch was even affected in some cases (anæsthesia). Paralysis, and contractions, and shrinking of the limbs, tremblings and painful cramps were observed in the one as in the other disease. Œdema, mostly partial, but sometimes general was more frequently seen in acrodynia than in pellagra. As has been remarked in pellagrous epidemics, these various symptoms presented

a very considerable number of *anomalies* in their progress and succession in acrodynia. In some cases the redness and black discoloration of the skin were the principal phenomena of the disease; in others, lesions of the digestive passages seemed to predominate; in others, again, such disorders of the nervous system were observed that it alone seemed to be affected. As in pellagra, also, the small number of bodies which have been examined, have exhibited alterations which were owing, perhaps, as much to accidental and intervening affections as to the disease itself.

*Acrodynia*, like pellagra, broke out in the spring, prevailed particularly during the summer, and seemed to become extinct in the middle of the severe winter of 1829–1830. As for the differences between these two diseases, they are much less striking than the analogies which exist; still it must be remarked that the pain in the feet and impossibility of walking were much more marked in the epidemic of Paris; that exposure to the sun is an evident occasional cause of pellagra, and that this latter affection, which almost always reappears each year in an aggravated form, is more frequently fatal, and gives rise to a species of insanity which was not seen in the epidemic of Paris.

The *mal de la rosa*, a disease epidemic in the Asturias, ought not, it would seem, to be separated from pellagra, of which it presents the principal symptoms. Some difference in the alterations of the skin only are remarked; in the *mal de la rosa* it becomes covered with scabs sometimes followed by cicatrices, whilst in pellagra, the form of the cutaneous disease is exanthematous or squamous.

Upon the whole, pellagra, the *mal de la rosa*, and the epidemic of Paris, seem to me to form one very natural group.

There is, without doubt, much similarity between pellagra and the epidemic disease which prevailed at Brünn (Moravia), in 1578, and which has been assimilated with syphilis: after the cutaneous symptoms, however, signs of melancholy, and other nervous phenomena, which are so commonly seen in pellagra, are known to have occurred (See Jordan (T.), *Brunno-Gallicus, seu luis novæ in Moraviâ exortæ descriptio*. Frankfort, 1577, 8vo.).

Certain epidemics which have been observed in Europe, and particularly in the north, from the middle of the sixteenth century till towards the end of the eighteenth, and which have generally been attributed to the use of damaged grain, as of spurred wheat or rye, may be assimilated to a certain point with pellagra. Ptyalism, functional disorders of the digestive organs, acute pains, a feeling of heat in the palms of the hands and soles of the feet, swellings and vesicles on the skin, cramps, tremblings of the body, and mania as a secondary phenomenon, have been remarked in these epidemics as in pellagra. Independently of the special cause assigned to these diseases, they are distinguished from pellagra by a variety of characters, and particularly the development and reappearance of their symptoms under the form of *fits* or *paroxysms*. (See, for a history of these epidemics, Ozanam, *Histoire des maladies épidémiques*, in 8vo. t. v. p. 120.)

1419. *Prognosis*.—Medical practitioners have distinguished three degrees of intensity in pellagra. In the *first*, *local* lesions are seen, produced by exposure to the sun, sometimes only with slight accompanying indisposition; in this case it is sufficient to remove the patient beyond the influence of the causes which have produced pellagra to accomplish a cure. The *second degree* is much more serious, still it is sometimes cured; it embraces those cases in which the alterations of the skin, after several relapses, become of a more decided nature, and disorders of the digestive organs more apparent. Nervous symptoms, vertigo, pains, cramps, slow pulse, &c., are added to ptyalism, heat in the throat, vomiting, and diarrhœa. The *third degree*, or confirmed pellagra, is constantly fatal; it is known by a constant febrile state, involuntary stools, and other phenomena, such as melancholy, pellagrous mania, stiffness of the body, convulsions, loss of flesh, &c. Acute delirium, although of a serious nature, is a less formidable symptom than chronic delirium.

Upon the whole, the prognosis should be based, not upon the state of the skin, or the alterations it has undergone, but upon due appreciation of the disorders of the various systems of the body generally.

The condition in life of individuals affected with pellagra must also be considered in prognosticating in regard to the issue of the disease. The mischief is aggravated, and the affection generally proves fatal to



those who are a prey to poverty and wretchedness, and obliged to remain within the influences of the causes which produce it. The state of the constitution, previous diseases, and complication, must also be taken into the account. *Pregnancy* and lactation exercise a pernicious influence. Writers have particularly insisted upon the serious character which pellagra assumes in those whose parents have died of the disease.

1420. *Treatment*.—Upon the first symptoms of the pellagrous affection, the patient ought to change his habits and occupation, or at least, abstract himself from the influence of the causes which appear to have occasioned it. Change of climate, of regimen and habits, will be the most certain remedy; unfortunately, those affected with pellagra, the poor inhabitants of the country, are scarcely ever in circumstances to follow this advice.

In the *slight* forms of pellagra, physicians are agreed upon the necessity of avoiding exposure to the sun, and of placing patients in a healthy and well-aired dwelling. The food should be good and substantial, consisting of animal and vegetable substances, in quantities proportionate to the wants of the system, and to the powers of the digestive organs. Milk sweetened, or old wine much diluted with water, are appropriate drinks.

Fontanetti has advised, at the commencement of the disease, the moderate use of bleeding and purgatives, according to the state of the skin and the mucous membranes. Tepid baths, both general and local, fomentations, anointing the skin, dry friction, sudorific or slightly laxative tisans, &c., may be made use of with advantage.

1421. In the more serious forms of this disease the treatment should be modified according to the various symptoms which present themselves. In pellagrous affections of the *digestive passages*, fomentations, emollient cataplasms, sometimes even the application of leeches to the pit of the stomach, to the abdomen or anus, should be had recourse to. Preparations of opium, rice water, barley water, emollient and narcotic injections will be useful in cases of obstinate diarrhœa.

Serious affections of the *brain* and spinal marrow must be attacked by blisters, and issues in the nucha, or along the course of the spine; a seton should be inserted in the nape of the neck, or several moxas applied along the back.

Cold applications to the head, leeches behind the ears, or bleeding, should be had recourse to in cases of *acute delirium*.

In *general trembling*, cold sulphureous baths, combined with antispasmodic remedies, are worthy of a trial.

Opium seems to be of use in *cramps*, in pains and tetanic stiffenings of the limbs.

Pellagrous *mania* requires treatment similar to that which is pursued in mental affections produced by other causes; only in almost all cases, the strength should be supported by mild and nutritious diet, and the other symptoms of the disease treated with circumspection.

#### Historical Notices.

1422. Frappoli, of Milan, (*animadversiones in morbum vulgò pellagram dict.* Mediolani, 1771,) was the first who published upon pellagra. Odoardi (*Dissertazione di una specie particolare di scorbutto*, Venezia, 1776), has assimilated the disease to scurvy, and has considered its causes, symptoms, and treatment, in this point of view. Gherardini (Mich.), in his *Descrizione della pellagra*, Milano, 1780, has given a good description of pellagra: he has well appreciated the influence of exposure to the sun on the cutaneous eruption. Albera (G. M.) (*Trattato teorico-prattico delle malattie dell' insolato di primavera volgarmente detto della Pellagra*, Venezia, 1784), is remarkable for his therapeutic views. Strambio (Gaetano) (*de pellagra*, Mediolani, 1786, 1787, 1789; *Dissertazione sulla pellagra*, 1794), has given a very good description of pellagra, and particularly of the nervous forms which it presents. Fanzago has published a series of memoirs on pellagra; he has studied its causes, its diagnosis, and treatment with care, and has related several particular cases: *Memorie sopra la pellagra*, Padova, 8vo. 1798; *Paralleli tra la pellagra ed alcune malattie*, Padova, 8vo. 1792; *sulla Pellagra memorie*, Padova, 8vo. Videmar (*De quadam impetiginis specie vulgò pellagra nuncupata disquisitio*, Mediol. 1790), Jansen (*de Pellagra morbo in Mediolanensi ducatu endemico*, in Dilect. opusc., vol. i. 325), and Boerio,

Ant. (*Storia della pellagra nel Carnovese*, Torino, 1811, 8vo.), have left a good summary of the information extant respecting pellagra, and some remarks on various symptoms of this disease. Jourdan has published a remarkable article on pellagra (*Dictionnaire des Sciences Médicales*). Strambio has insisted on the inflammatory character of the functional disorder of the digestive organs in pellagra (*Natura, sede e cagioni della pellagra disunte dai libri di Gaetano Strambio, e della dottrina Broussesiiana*, Milano, 1820). Fantonetti has dissected the skin, with great care, of a man affected with pellagra (*Trattato dei mali della pelle di P. Rayer*, art. *Pellagra*). Brierre de Boismont (*de la Pellagra et de la folie pellagreuse*, 8vo. Paris, 1834), has published an interesting paper on pellagra, particularly in a therapeutical and anatomico-pathological point of view. And. Aug. Spessa (*sulla Pellagra*, *Annali universali di medicina di Omodei*, Milano, 1832, vol. lxiv. p. 207), has attributed pellagra to inhabiting stables, &c. (a)

#### ROSA; OR DISEASE OF THE ASTURIAS.

1423. Thierry has given the following description of *la rosa*:

This disease generally appears at the spring equinox. It shows itself on different parts of the body by simple redness, and harshness of the skin. It then degenerates into rough, dry, blackish crusts, intersected with deep cracks, which often penetrate to the quick. These dry and fall off in summer, leaving reddish, very smooth and shining stains or marks behind them, devoid of hair, depressed below the level of the surrounding skin, and very similar to the cicatrices of burns. It is probably from the appearance of these marks that the disease has been denominated *rosa*. They remain through life. In the spring of every year they are covered anew with fresh crusts, which become ever more and more disgusting to look upon. Occasionally a large yellowish or ash-coloured crust occupies the forehead of the neck, and extends from thence over the clavicles and upper portion of the sternum, forming a band of two fingers breadth, and descending half way down the breast, like the collar of one of the orders of knighthood; this appearance is quite characteristic.

To these symptoms there is added a constant *shaking* or *trembling* of the head and upper parts of the body, which sometimes becomes so violent that patients experience great difficulty in keeping themselves erect; there are also heat in the mouth, vesicles on the lips, foulness of tongue, extreme weakness of stomach and of the body generally, and a feeling of general heaviness. Through the night burning heat is complained of, insomnia, dejection, melancholy, groaning without any assignable reason, &c. Patients for the most part are in the entire possession of their intellectual faculties: several, however, suffer from slight delirium, hebetude, and a loss of the sense of taste, and particularly of touch. This state may be succeeded by erysipelas, ulcers and erratic fever.

This disease may end in dropsy, in scrofulous affections, and in marasmus; at other times it terminates in *mania*, which is seldom of a violent kind; the patients sink into an undefinable state of dejection, which leads them to forsake their homes and to seek solitude, and their excess of depression and of suffering often reduces them to utter despair. This insanity, which does not generally show itself save about the summer solstice, commonly proves fatal.

*Rosa* is particularly frequent in the province of Oviedo, where the sky is generally overcast, and the soil is barren (Thierry, *Obs. de Physique et de Médecine, faites en Espagne*, 8vo. Paris, 1791).

Casal, who practised for thirty years in the Asturias, informs us that the *rosa* is extremely rebellious. Thierry cured one woman after two months of treatment with the æthiops mineral, crude antimony, saffron, and some of the balsams.

All we have upon this disease is still too little to enable us to come

(a) M. Rayer has omitted, in the preceding list, the work of Sig. Vincenzo Chiarugi, M. D., entitled *Saggio di Ricerche sulla Pellagra*, Firenze, 1814: with two coloured drawings. The editor's first knowledge of pellagra was derived from this volume, which he procured many years since, when in Italy.



to any definitive opinion in regard to its character and proper treatment. The analogy it bears to pellagra is nevertheless striking.

#### Historical Notices.

1424. The chief documents we possess upon *la rosa*, are contained in the work of Thierry, the title of which is given above, and in that by Casal, entitled *Historia natural y medica de principado de Asturias*, 4to. Madrid, 1762.

#### ACRODYNIA.

1425. In the month of June, 1828, an epidemic disease, principally characterized by pain and numbness of the lower extremities, erythematous patches, and more rarely by a blackish discoloration of the cuticle, attracted the attention of the practitioners of Paris. This malady first appeared at the Hôspice de Marie Thérèse, and was soon afterwards observed in various quarters of the city. It made its way at the same time into several barracks; in one, 560 out of 700 individuals were attacked with it. A great number of patients labouring under it were received into the different hospitals, and I had many under my charge in that of St. Antoine. During the following winter the disease abated; but in the month of March, it again made its appearance in the Barrack de la Courtille. The epidemic seemed to have become completely extinct towards the midwinter of 1829-30.

1426. *Symptoms*.—Some patients complained at first of simple loss of appetite; others suffered with sickness and vomiting, colicky pains in the bowels, frequently with diarrhœa, and the eyes at the same time became inflamed and watery. From the very commencement a kind of puffing of the face was observed among many patients, which occasionally extended to other regions of the body.

The skin of the palms of the hands and soles of the feet presented, often from the invasion of the disease, a red colour which frequently extended along their edges to other parts of the body, to the legs more especially, in the shape of patches of various shades of red, sometimes very similar to ecchymoses. Pretty frequently, too, the skin assumed a blackish or brown appearance, as if it had been rubbed over with soot; this happened more particularly on the abdomen, neck, and about the bends of the joints; it very rarely happened that this discoloration extended to the face.

Numbers of small spots, pustules, phlyctenæ, coppery spots or patches, and even boils were evolved upon the hands and feet. A process of desquamation, assisted by profuse local sweats, ended by laying the corpus mucosum completely bare. This process was often renewed again and again upon the same place, and took place over all the regions affected.

Occasionally an evident thickening of the cuticle was observed, especially over the articulations of the feet; this sometimes formed an elongated and painful roll between the nail and the pulp composing the point of the finger.

Sensations of numbness, and of tingling, and occasionally painful shootings were felt in the hands and feet, more especially in the latter, and generally of greater severity through the night than during the day, and more intense at all times in the palms and soles than anywhere else. They sometimes extended up the legs, thighs and arms, to the trunk. A feeling of cold, succeeded by one of burning heat, sometimes obliged patients to put their feet and hands out of their bed; some complained of the slightest pressure made upon those parts as intolerably painful; in others the feet and hands were so much benumbed that sensation and touch were almost entirely abolished; others, again, were affected with true paralysis of these parts, accompanied with contraction and wasting of the limbs, in which, nevertheless, occasional painful twitchings and shootings were experienced.

The symptoms presented very considerable variety at different periods of the epidemic; in one the alteration of the sensibility was one of the most marked; in another the digestive organs were the parts principally implicated, and in a third, œdema and the brownish hue of the surface were the most striking peculiarities. In the Prison Montaigu, almost all who were affected presented the brown discolora-

tion of the skin, whilst this symptom was not seen in the Barracks de l'Oursine and de la Courtille; in the latter, violent convulsive twitchings in the limbs were the principal phenomenon, in that de l'Oursine, after the numbness, œdema of the face, ophthalmia and vomiting were the most remarkable symptoms.

The disease generally lasted for several months, sometimes it ceased after a few weeks. Many patients, after recovering completely to all appearance, had relapses which did not end but with the epidemic. It rarely proved fatal except among the aged. The lesions of the viscera discovered after death were evidently owing to complications.

1427. *Causes*.—A variety of causes have been presumed for this disease, such as the adulteration of the articles used for food, bread, wine, &c., some change in the water, salt, potatoes, &c.; a vitiated state of the atmosphere, &c. But the epidemic prevailed in the most healthy barracks, in the best ventilated apartments, and did not show itself in other places much less advantageously situated. It was observed, during its prevalence, that it attacked adults and the aged more particularly, that men were more liable to it than women, and the poor than the rich; it did not appear to be contagious. The disease was viewed variously as rheumatic in its nature, as an inflammation of the skin and mucous membranes, as the effect of a peculiar lesion of the nervous system, especially of the spinal marrow; lastly, as a new disease.

1428. *Diagnosis*.—Pellagra, of all known diseases, is that with which acrodynia has the greatest analogy; both are characterized by a triple manifestation of cutaneous symptoms, of gastro-intestinal symptoms, and of nervous symptoms, the similarity of which is certainly striking. (Vide *Pellagra*.) In several epidemics attributed to indifferent qualities of the cerealia, the spurred rye, &c., the greater number of the symptoms of acrodynia will also be found noted, such as tinglings and numbness of the feet and hands, amounting sometimes to paralysis, contraction of the fingers, cramps of the legs, swelling of the feet, phlyctenæ on these parts, &c. These epidemics, like that of Paris of 1828, also occurred in cold and moist summers.

1429. *Treatment*.—Uncertain of the actual nature of acrodynia, I, like the rest of the profession, tried a variety of means which I conceived calculated to abate the predominating symptoms, but without very marked success, the disease almost constantly proving very tedious and various in its phenomena. I generally prescribed Seltzer water and anodynes when the gastric symptoms were pressing. When the nervous symptoms appeared with great intensity from the first, I ordered a small bleeding, and the patient was put into the warm bath, and took a grain of opium at night. If these symptoms only occurred in the second or third stages of the disease, and when the general system had already suffered, I ordered the sulphureous water bath, and sometimes with good effect. As to the cutaneous symptoms, I never treated them save with tepid baths and fomentations and emollient applications.

#### Historical Notices.

1430. First pointed out by M. Cayol, and subsequently by M. Chomel, acrodynia has since been the subject of numerous researches: Genest, *Recherches sur l'affection épidémique qui régné maintenant à Paris*. (Arch. Génér. de Médéc., 1828, t. xviii. p. 232, t. xix. p. 63, p. 357.) *Constitution médicale ou tableau des obs. météorol. et méd. recueillies en 1829, à la clinique de M. Cayol* (Revue Méd., 1830, t. ii. p. 48). Dalmás, *Compte rendu de la clinique de M. Chomel* (Journ. Hebdomad., t. i. p. 333). Chardon fils, *De l'acrodynie ou de l'épidémie qui a régné à Paris et dans ses environs, l'année 1828*, in 8vo., Paris. Dezeimeris, *Sur l'épidémie de Paris* (Journal général des hôpitaux, nos. 2, 4, 8, 17.—Dance, art. *Acrodynie* (Diction. de médéc., 1832).

#### DISEASE OF MELADA,

(An Island in the Gulf of Venice).

1431. In a village of the Isle of Melada, known for the slight detentions which are there heard, several of the inhabitants are subject



to a disease affecting the skin of the extremities which bears a certain resemblance to that of Anna Jackson (§ 1173), and of the brothers Lambert (§ 1102).

Eleven individuals belonging to three families present a similar alteration of the skin of the palms of the hands and of the soles of the feet and toes.

It is not above half a century ago since this alteration of the integuments was first described; how long it may have existed previously is uncertain; the accounts we have of it extend over no more than fifty years, and exhibit it as possessing the same features during the whole of this time.

1432. Children at their birth present in the palms of their hands, unequivocal signs of this disease, which is developed as they advance in years. The skin of this region becomes gradually thicker and thicker and firmer, and extends so as to cover the whole superficies of the parts above mentioned. The alteration then spreads round upon both sides of the fingers and toes, and in the angles between them, and to the articulations of the metacarpus and metatarsus, so that the skin at length acquires the appearance of a long layer of yellowish tallow, but of the consistence of leather; it is rough and uneven in consequence of the fissures, with which it is traversed, which give it the look of the bark of the cork tree. The outermost layer of the skin is then transformed into a substance that is almost completely inorganic, through which neither cutaneous exhalation nor sweat ever finds its way. There is no longer the albuminous transudation by which the cuticle is renewed as it is worn away.

The cuticle of the elbows is also thickened; the corion and rete mucosum form but a single layer; the integuments of the carpus and tarsus are sallow and wrinkled; the knees, too, are often covered with squamæ and warty excrescences; the hands, in addition to this, and feet, are impotent. The parts affected are entirely without sensation; they never swell; the epidermis over them seems never to be raised by the effusion of a fluid under it; neither do they ever ulcerate.

The feet of the persons affected diffuse a very fetid odour. The perspiration seems to be retained within the deep cracks of the skin, and there to acquire great fetor. The cause of the cracks appears to be entirely mechanical.

This disease is an organic and hereditary defect or vice of conformation. It does not extend to the other parts of the body, and does not seem to influence the general health.

The children who present this defect of conformation of the skin are occasionally born of parents who are free from it, but who were themselves the offspring of individuals who had laboured under it. It is common to both sexes. Some of the children of a family are born with the disease, others altogether free from it. Propagation by way of contagion is inadmissible. The disease bears some analogy to ichthyosis; but it is followed by worse effects than this complaint, preventing the unfortunate persons who labour under it from earning their livelihood by their industry, the fingers, especially the ring and little finger being in a permanent state of forced flexion. (Letter of Dr. Stulli: *Sur une espèce de maladie cutanée. Bullet des sc. Méd. de Feruss.*, t. xxi. p. 96.)

## SIXTH GROUP.

### ENDEMIC BLANCHING AND DISCOLORATION OF THE SKIN.

1433. This group comprises the particular blanchings and discolorations of the skin endemical in certain countries.

#### CARATE.

1434. Under the name of *Carate*, a disease of the skin peculiar to the countries bordering the Cordilleras, and especially prevalent in the kingdom of New Granada, has been described. Bonpland observed it on the banks of the river Magdalena at Monpox, and onwards to

the confines of Peru. It was so common in some villages, that but few individuals were encountered altogether free from it. It is said, however, to attack negroes and mulattoes more particularly.

Carate appears under the form of spots or patches spread over the whole body, but more abundantly over the arms and forearms, cheeks and breasts among women. These patches are, in some cases, of the colour of coffee, in others of a dull white, in others of a crimson red, and in others of a livid white; the skin, by the mingling and contrast of these different tints, often presents a marbled appearance. Amongst the natives, *Carate* is said to whiten the blacks, and to blacken the whites. The disease is not contagious.

M. Daste assures us, that this affection is successfully treated by means of the corrosive sublimate. M. Zea says it is incurable when it has made a certain progress. It does not influence the general health; it is only unpleasant to look upon.

These accounts are extracted from a note, by M. Alibert, *sur la carate ou taches endémiques des Cordillères*, in the *Revue Méd.*, t. xxiii. p. 228, 1829.

#### PINTA.

1435. M'Lellan states that a disease of the skin, known under the name of *pinta*, or *blue spots*, made its appearance in the neighbourhood of the volcano of Jorulla, in the northern part of the province of Valladolid, Mexico, and soon spread southwards as far as the town of Mascala, on the road from Mexico to Aispuello. The populace, whose skins are of a dark colour, were the principal sufferers. The disease began with slight shivering and nausea, followed by trifling fever. These symptoms lasted for a few days only; when they subsided, pale and yellowish-coloured spots were observed over the face, chest, and extremities; these spots grew paler and paler, till they became nearly white; but they then began to deepen in their tint, and went on till they acquired the same depth of shade as the skin of the negro. The integuments, too, grew rough and squamous, appeared slightly inflamed, and fell readily into open ulcers. The cutaneous perspiration was fetid, but the general health was not much affected. M'Lellan informs us that in Mexico there was a regiment composed of individuals whose skin had undergone this singular change, and which was denominated the *pinta* regiment. The disease appears to be contagious. Individuals born and brought up in districts where the *pinta* is only known by name, become affected with it after a residence of a few years, in parts where it prevails, and nurses have been known to communicate it to their nurslings. Persons in easy circumstances, nevertheless, live all their lives in the district of *Pinta*, and take into their service individuals affected with the spots in question, without contracting it themselves. They appear to enjoy immunity from its attacks, by the most sedulous attention to personal cleanliness, by using the bath continually, performing ablutions, &c. Although the individuals affected with *pinta* are to be met with all around Mexico, selling a variety of wares, &c., the disease is only known by name on the coast of the Pacific Ocean and adjacent countries, divided by the mountains from the *Tierra Caliente*. The physicians of the country regard *pinta* as a specific and incurable disease (*An acct. of the pinta or blue stain, a singular cutaneous disease prevailing in Mexico*, by S. M'Lellan, *Ed. Med. and Surg. Journ.*, 1826).

*Pinta* must be looked upon as associated with the other morbid or accidental discolorations of the skin observed in Europe—cloasma, nigrities, &c.

## SEVENTH GROUP.

### ACUTE ENDEMIC ERUPTIONS.

1436. This group comprises the acute diseases which are peculiar to certain countries.



## LICHEN TROPICUS; PRICKLY HEAT.

1437. I have already noticed the chief observations made on this disease (§ 628) by Boutius in India (*De Medicina Indorum*, cap. 18), by Hillary in Barbadoes (*Obs. on the Changes of the Air and concomitant Epidemical Diseases in the island of Barbadoes*, 8vo., Lond. 1759), in Africa by Winterbottom, whose remarks are published by Willan (on *Cutaneous Diseases*, p. 57), and by Dr. James Johnson (*the Influence of Tropical Climates, &c.*), who also mentions the researches of Dr. Moseley.

## ILLINOIS ITCH.

1438. Horiatio Newhall states that four-fifths of the individuals who have lived for a year in the state of Illinois (United States), become affected with a disease known under the name of the *Illinois itch*.

The disease begins with severe itching of the arms and thighs, without any eruption, which induces the individual affected to rub and scratch himself vigorously to appease the sensation. The effect of this indulgence, however, is to bring out in a few seconds an eruption of small papulæ, of the same colour as the skin. These papulæ are not pointed, and are not inflamed around their bases. One crop often disappears whilst another is evolved; the latter become vesicular after the lapse of a day or two. The vesicles are more pointed than the papulæ, and are filled with a clear transparent fluid, which, in the course of a few days, changes into an opaque matter of a pale yellow colour. There is no inflammation around the vesicles until after a great deal of scratching, which seems to occasion the inflammation that subsequently occurs.

If the vesicles are punctured at the first with the point of a needle, they disappear without leaving any traces of their presence; but if their apices be torn off at a later period, a watery fluid, mixed with blood, exudes, and black or brownish crusts are formed, which vanish in the course of time, but leave small permanent cicatrices behind them.

Where the affection has lasted long, the vesicles are occasionally intermingled with psyracious pustules containing a straw-coloured matter. These often become confluent, and by drying give rise to broad and irregular crusts. The crusts are commonly situated on the legs in men, on the legs and breasts of women, and on the head and a variety of other parts in children, among whom the disease might very well be confounded with crusta lactea. Occurring around the fingers, the eruption has sometimes caused the loss of the nails.

In this affection, then, we have papulæ without inflammation about their bases, papulæ with inflammation round them, vesicles, pustules, minute squamæ and broad crusts, external characters which prevent its being assigned to any particular place in the chart of cutaneous diseases.

The eruption is most copious on the inner parts of the thighs, arms, wrists, between the fingers, and around the axillæ and scrotum. In young children the sole of the foot is particularly affected; the face is never implicated. The pruritus is intolerable, and is increased by heat; the hands are occasionally swelled to such a degree as to force the individual to abstain from all kind of manual labour. There is not in general any fever; the disease is not contagious, and cannot be communicated by inoculation. Mr. Newhall has seen persons affected with this disease during four and five years at a time (Newhall, *Rem. on the disease of the skin called Illinois Itch*, *New. Engl. Journal*, vol. xviii. p. 134. Ext. in *Bullet. des Sciences Méd. de Ferussac*, t. xviii. p. 65).

## EIGHTH GROUP.

## GANGRENOUS EPIDEMICS.

1439. This eighth group comprises two gangrenous affections; the *Nome* of Sweden and the *Mal des Ardens* or *ignis sacer* of the middle ages.

## NOME OF SWEDEN.

1440. In the ninth volume of the Memoirs of the Academy of Stockholm, we read the following accounts: "Among the children of the poor in Sweden, from one to ten years of age, who live on salted meats and breathe a corrupt atmosphere, there prevails a species of ulcer denominated *nome*. This disease begins with uneasiness, lassitude, pallor, fetor of the breath, heat, thirst, diarrhœa, inappetence, restlessness, sleeplessness, and rambling, and transient swellings of the body. A *black pustule* or spot then makes its appearance on the face or neck; the gums assume a dark green colour; the teeth fall out; fetid saliva distils from the mouth; the tongue, face and lips swell; the whole body becomes painful; the urine is brown; the pulse small and quick; the respiration frequent; trembling from weakness. From the second day the extremities become cold; the black spot extends; the crust falls off and exposes an ulcer covered with a grayish-black, thick and fetid pus; the pulse becomes frequent, unequal and weak, and the patient soon dies.

The disease consists in a scorbutic gangrene, which requires the most prompt measures for its relief. The best internal medicine is the decoction of bark with sulphuric acid; externally, the gangrenous spot is bathed with diluted muriatic acid. When the eschar is detached, the sore is dressed with decoction of bark, some digestive ointment, with a solution of sublimate in alcohol, volatile alkali, myrrh, diluted sulphuric acid, &c.

Change of air, exercise, and wholesome food, are necessary to complete the cure. The ulcer never bleeds; the patients sometimes suffer from epistaxis, the blood being then watery and pale.

It is worth while to compare this description with that of the *rouge* of Hippocrates (*Prædict.*, lib. ii.), and of the gangrenous affection of the cheeks of children in France.

## IGNIS SACER OF THE MIDDLE AGES.

1441. In the eleventh, twelfth, and thirteenth centuries a disease variously entitled *ignis sacer*, *mal des ardens*, and *St. Anthony's fire*, committed great ravages in France. Rudolphe (*Hist.*, lib. 2, cap. 7, *de incendiis*), tells us, that when this fire attacked a limb, it was straightway detached from the body, after being burned. Sigebert, speaking of the *St. Anthony's fire* which prevailed in *Basse Lorraine*, assures us that the extremities, as black as charcoal, were detached from the body, and that the sufferers, having lost their feet and hands, died miserably, or dragged out a still more miserable existence.

The Martyrologia has further, under the date of 1140, in the reign of Louis VII: "A disease showed itself in Paris which the physicians called *ignis sacer*, and which attacked persons on their genitals." (Consult Mezerai, *Abregé Chronol. de l'Hist. de la France*, and particularly the learned memoir of Jussieu, Paulet, Saillant, and Tessier: *Rech. sur le feu Saint Antoine*, lues le 31 Dec. 1776. *Mém. de l'Acad. Royale de Médecine*, t. i. p. 260.)

This epidemic *ignis sacer* must not be confounded with the *ignis sacer* described by Celsus, which cannot certainly be assimilated to any disease known at the present day: "Sacer quoque *ignis malis* ulceribus annumerari debet. Ejus duæ species sunt: *alterum genus* est subrubicundum aut mixtum rubore atque pallore, exasperatumque per pustulas continuas, quarum nulla altera major est, sed plurimæ perëxiguæ. In his semper ferè pus, et sæpè rubor cum calore est, serpentine id nonnunquàm, sanescente eo quod primum vitium est, nonnunquàm etiam exulcerato, ubi ruptis pustulis ulcus continuatur, humorque exit qui esse inter saniem et pus videri potest. Fit maximè in pectore, aut lateribus, aut eminentibus partibus, præcipueque in plantis. *Alterum* autem est in summæ cutis exulceratione, sed sine altitudine, latum, sublividum inæqualiter tamen, mediumque sanescit, extremis procedentibus, ac sæpè id quod jam sanum videbatur, interùm exulceratur. At circà proxima cutis quæ vitium receptura est, tumidior et durior est, coloremque habet ex rubro subnigrum. Atque hoc quoque malo ferè corpora seniora tentantur, aut quæ mali habitûs sunt, sed in cruribus maximè. Omnis autem sacer *ignis*, aut minimum periculum habet ex his quæ serpunt, sic propè difficillimè tollitur. Medicamentum ejus fortuitum est febris quæ uno die humorem noxium



absumat. Pus quò crassius et albidius est, eò periculi minùs est. Prodest etiam infrà os ulcerum cædi, quò plus puris exeat, et id, quo ibi corruptum corpus est, extrahat. Sed tamen si febricula accessit, abstinentiâ, lectulo, alvi ductione opus est. In omni verò sacro igni, neque lenibus et glutinosis cibis, neque salsis et acribus utendum est, sed his quæ inter utrumque sunt, qualis est panis sine fermento, piscis, hædus, aves, exceptoque apro, omnis ferè venatio. Si non est febricula, et gestatio utilis est, et ambulatio, et vinum, et balneum. Atque in hoc quoque genere potio magis liberalis esse quàm cibus debet. Ipsa autem ulcera si mediocriter serpunt, aquâ calidâ; si vehementius, vino calido fovenda sunt; deindè acu pustulæ, quæcumque sunt, aperientiæ: tùm imponenda ea quæ putrem carnem excedant. Ubi inflammatio sublata, ulcusque purgatum est, imponi lene medicamentum debet. In altero autem genere possunt proficere mala cotonea in vino cocta atque contrita; potest emplastrum vel Hieræ, vel tetrapharmacum, cui quinta pars thuris adjecta sit: potest nigra edera ex vino austero cocta: ac, si celeriter malum serpit, non aliud magis proficit. Purgato ulcere quod in summâ cute esse proposui, satis ad sanitatem eadem lenia medicamenta proficiunt.” (Celsus. *De Medicina*, lib. v. sect. xxviii. 4.)

## NINTH GROUP.

### CONTAGIOUS PSEUDO-MEMBRANOUS DISEASES.

1442. The skin excoriated by the action of blisters or accidental ulcers is liable to be attacked with two contagious diseases of a pseudo-membranous appearance, *diphtheritis* and *hospital gangrene*. For a particular account of the latter, I beg to refer to the works of Delpech. (*Mem. sur la pourriture d'hôpital*, 8vo. Paris, 1815.)

#### CUTANEOUS DIPHtherITIS.

1443. From the researches of Messrs. Bretonneau and Trousseau, *diphtheritis*, *angina maligna* or *angina membranacea*, is occasionally accompanied with a pseudo-membranous inflammation of the skin of the same nature, and which, during the prevalence of epidemic *diphtheritis* may even display itself upon the skin, without there being any accompanying affection of the mouth or throat, in those who are exposed to the contagion. Not having myself had an opportunity of observing any epidemic *angina membranacea*, I shall here give an abstract of the remarks of M. Trousseau, and for further details, beg to refer to his memoir (*Archives Gén. de Méd.*, t. xxiii. *De la diphtherite cutanée*).

*Angina maligna* prevailed epidemically in September, 1828, at Nouan-le-Fusilier, Cher et Loir. A blister having been applied to the nape of the neck of a young girl labouring under the above-mentioned pharyngeal *diphtheritis*, suppurated abundantly, and the excoriated surface became covered with false membranes, as did an ulcer also which this girl had long laboured under on her foot. The blister, which was but four inches in diameter at first, four days afterwards was more than six; it was excessively painful, and discharged profusely. It spread down the back, throwing out irregular pointed rays like the scores of a backgammon-board, and was surrounded with a broad erysipelatous areola, much deeper in colour below than above. The part denuded of epidermis appeared depressed, and really was so, when the level of the tumefied surrounding parts was made the standard of reckoning. This part was covered with fibrinous superposed layers, of a more yellowish white towards the centre than about the circumference of the part. In the middle they were two, three, and even four lines in thickness, and bore a perfect resemblance to the dry pleuritic concretions found in the cavity of the chest when inflammation is on the decline, and the serous fluid, which had also been effused, had almost entirely disappeared. On raising several of these layers with the blade of a knife, they were found to adhere so firmly to the tissue of the skin, that they could only be detached with a cer-

tain difficulty. The blister had always been dressed with butter. The surrounding erysipelas had a peculiar appearance; the redness was so much the deeper the nearer it was considered to the excoriated surfaces. The cuticle was raised in multitudes of points by the effusion under it of small quantities of milky serum, so that the skin was covered with confluent vesicles in the vicinity of the sore, and with others, but fewer and fewer in number, as the healthy integument was neared. Some of the vesicles appeared to be formed by the fusion of several others; several, simple or agglomerated, had opened, and there the skin was seen covered with a whitish pseudo-membranous deposit; these ulcers ran into others of smaller size, and this was the way in which the disease appeared to spread.

M. Trousseau gives several other cases which go to prove that blistered surfaces and excoriations, in individuals labouring under *diphtheritis* of the throat and mouth, had a great tendency during the epidemic prevalence of this disease, to assume a peculiar appearance, and to undergo alterations analogous to those exhibited by the mucous membranes. Other facts have shown, that persons unaffected themselves with *diphtheritis*, but in contact with those who were, and having an excoriated part about them, were very apt to have this covered with a false membrane. M. Trousseau mentions five cases of *diphtheritic* affection behind the ears, or of the scalp. In one, the affection extended to the nape of the neck; in another, to this part and down the back; and in a third, to the back and loins. He also mentions instances of pseudo-membranous deposits upon an excoriation of the nape of the neck, of the side of the neck and face, of the lips, of the chin, two of the breasts, one of the abdomen, one of the prepuce, one of the scrotum, two of the anus, three of the vulva, one of the thigh, one of the foot, and two or three others on different parts of the body.

The treatment of *diphtheritis* of the skin ought to be directed upon the same principles as that of the affection of the mucous membranes.

## TENTH GROUP.

### TRICHOMATOUS AFFECTIONS.

1444. In Poland, the inhabitants, and several species of animals, are subject to an epidemic disease which attacks the hair especially, and the nails; this disease is denominated *Plica*; its influence, however, does not always end there, but sometimes extends to other organs, and then gives rise to a variety of affections which are entitled *trichomatous*.

#### PLICA.

1445. *Plica* is a chronic disease, peculiar to Poland, and characterized by the agglutination and anomalous development of the hair, and sometimes by an alteration of the nails, which become spongy and blackish.

1446. *Symptoms*.—*Plica* often begins after an attack of acute fever, preceded by languor, pains like those of rheumatism in the head and extremities, occasionally vertigo, and a singular and invincible disposition to sleep, tingling and rushing noises in the ears, pains in the orbits, ophthalmia, and coryza; *plica* also occurs occasionally after an attack of acute fever, with *clammy* sweats (*sueurs gluantes*); sometimes, too, a kind of redness is observed over the thighs, and an alteration of the nails, which become black and rough. In other cases, however, *plica* makes its attack suddenly without precursory symptoms.

When the head is the part affected, the scalp is sore to the touch and excessively itchy; a clammy or agglutinating sweat of a disagreeable odour then occurs over part of the cranium; the hair becomes unctuous, is stuck together, and appears altered; the hairs affected appear distended with an adhesive or unctuous matter of a reddish or brownish colour, which has been believed to be sanguinolent in its nature by a great many observers. This matter is produced at the



extremity of the bulb, and ascends to the very end of the hair. The hair is so acutely sensible that the slightest touch occasions severe pain in the roots. A viscid matter of a very offensive smell, like spoiled vinegar, mice, or garlic, exudes from the whole surface of each affected hair. This matter glues the hairs together at first at their exit from their skin, and then along their entire length; this matter, which also appears to be secreted from the whole surface of the scalp, congeals, and then dries into a kind of incrustation. If there be no exudation, as happens sometimes, though rarely, the disease is entitled *plica sicca*, or dry plica.

The hair is matted and stuck together in a variety of ways, sometimes in single locks of various thickness and length, so as to resemble ropes (*plica multiformis*, *common male plica*); sometimes these masses unite together and compose one very long and thick club, like the tail of a horse (*plica caudiformis*); and, again, the hair gets matted and glued together, without separating into locks, into one uniform intricate mass of various magnitudes (*common female plica*). The hair of the beard, axillæ and pubes, is also liable to be attacked with this disease.

Professor Kaltschmidt, of Jena, possesses the pubes of a woman, the hair of which is of such length that it must readily have gone round the body. The nails of the hands and feet generally become long, yellowish, livid, black, and sometimes hooked.

Immense numbers of pediculi are occasionally developed, even among those who are most careful of their persons, in the course of this affection.

1447. *Anatomical observations.*—We are informed by Joseph Frank, that the hair bulbs are enlarged, and that the surface of the scalp here and there presents running ulcers in this disease. In the museum of Meckel, at Halle, there are the scalps of two individuals who died whilst labouring under plica, which have been injected with the greatest minuteness, without the smallest particle of the injection having found its way into the stems of the hair. Lafontaine, having examined the pilliferous bulbs of a patient affected with plica, after his death, found them excessively tumefied, and full of a glutinous matter of a yellowish-white colour, which they poured out when compressed. Gilbert has also seen the bulbs of the affected hairs distended with a black and fetid matter. Rolink and Vicat assure us that the hairs are often distended with a fluid which ultimately bursts them, and is discharged externally. Schlegel says, that in one case he found the whole hairs of the body enlarged, and some of them distended with a fluid of a yellowish-brown colour, to six times their natural size. Gasc saw a woman, whose body, about the seventh month of her pregnancy, assumed a blackish hue, and whose hair appeared enlarged and distended with a fluid of a darker colour than that which penetrates it generally. M. Blandin is of opinion that in plica, the papillæ or bulbs of the hair rise above the level of the skin, within the infundibuliform cavity of the root of the hair, in the same manner as the papilla or bulb of the feather elongates and produces the quill in the young bird. M. Sedillot, who removed five or six locks of hair affected with plica from the head of a child between seven and eight years of age, in Galicia, examined these particularly with the microscope. The internal canal of each individual hair was found much larger than it is in healthy hair, and the cellular cavities, especially those near the canal, were much more distinct than usual.

1448. *Causes.*—Hercules de Saxonia and Thomas Minadous speak, in 1610, of plica as a disease already long known. The greater number of writers fix the date of its first appearance in Poland about the year 1285, under the reign of Nezek-le-Noir. This disease would seem to be getting rarer and rarer every year. Lafontaine states, that in the provinces of Cracow and Sandomir, plica attacks the peasantry, beggars, and Jews, in the proportion of one and a half in twenty, the nobility and the wealthy burghers in that of two in thirty or forty. At Warsaw and in the surrounding districts, the disease attacks the first classes in the proportion of four in from forty to forty-five, and the second classes in that of three in from ninety to a hundred. In Lithuania the same proportions are observed as at Warsaw; in Volhynia and the Ukraine, the same as at Cracow. Schlegel, Gasc, and Hartmann, say that these ratios are too large, that the disease is not so frequent.

Plica has always been more frequent on the banks of the Vistula and Borysthenes, in damp and marshy situations, than in any other parts of Poland.

Plica attacks the human subject primarily. Some writers have imagined that it could be communicated from animals to man.

The custom which prevails in Poland, of shaving the heads of the children, (a) neglect of cleanliness, the heat of the head-dress, and the exposure of the skin to cold subsequently, appear to favour the production of this disease.

1449. *Diagnosis.*—The precursory symptoms of plica, the alterations of the nails which very commonly accompany it, the swelling of the hair, the glutinous fluid discharged from its roots, &c., are so many unequivocal characters which distinguish plica from simple felting of the hair, or any other affection of the hairy scalp.

1450. *Prognosis and treatment.*—The occurrence of plica in individuals labouring under paralysis, and a variety of serious diseases, has occasionally seemed to be beneficial. When plica is left to itself, the febrile or precursory symptoms disappear after a certain time; as an effect of the growth of the hair, the diseased portion extends to a distance from the skin; in the course of several months or a year, the discharge diminishes, and ends in disappearing entirely; it is now only that the generality of the Poles themselves, or of their physicians, recommend the hair to be cut; Lafontaine, Schlegel, and Hartmann, all assure us, that the section of the affected masses before this time, has been known to be followed by amaurosis, convulsions, apoplexy, epilepsy, and even death. Alarmed or taught by such occurrences, the common people often go about with the plica till it drops off, and sometimes all their lives.

Various measures have been tried to lessen the severity of this disease, or to obtain its cure; the results of such experiments as have been made with bitters and tonics, with antimonials, lotions of different kinds, baths and fumigations, appear to be little conclusive as to their worth or inefficacy.

#### Historical Notices.

1451. Among the works published on plica, those of Lafontaine (*Traité de la plique Polonoise*, &c., trad. par A. J. L. Jourdan, 8vo. Paris, 1808), and of Schlegel, (*Ueber die Ursachen des Weichselzopfes*, 8vo. Jena, 1806,) are particularly worthy of notice. Dr. Burckhard Elbe (*Die Lehre von den Huaren*, 2 vols. 8vo. Wien, 1831), has given a bibliographical note, which completes that of Lafontaine. Messrs. Sedillot (*Nouv. considerations sur la Pligue*, 8vo. Paris, 1832), and Brière de Boismont (*Archiv. Gén. de Médecine*, t. xxxiii. p. 66), (b) have more recently published on the actual state of the disease.

### ELEVENTH GROUP.

#### DISEASES WHICH HAVE DISAPPEARED.

1452. In this group I have united several diseases which do not now occur, at least which never show themselves with the characters they presented in former times, when they prevailed often extensively.

#### SUDOR ANGLICUS. [SWEATY SICKNESS.]

1453. The description of this disease, by Dr. John Kaye, or Caius, is looked upon as the best we possess:

(a) Is not the author mistaken here? It was a religious custom in Poland, prevalent before the introduction of Christianity, to refrain from cutting the hair of children till they had reached their second year, when it was cut off with ceremony, and they received their names.

(b) The paper of Brière de Boismont is extracted from an unpublished memoir of Dr. Marcinkowske. A number of its chief details is given in the *Edinb. Med. and Surg. Journ.*, 1834.



"Ad decimum septimum calendas maias anni quinquagesimi primi suprâ millesimum et quingentesimum à Christo nato, cum jam in alt pace omnia et tranquilla essent, nec ullis perturbata molestiis, subita et insueta nostris hominibus aegritudo, *Salopiæ* (clari munitique ad Sabrinam flumen oppidi), irrepsit, cujus et nomen et natura primo suo ortu multos fefellerunt. Sed hi postea malo docti, et veteris injuriæ memores, sudorem, quem britannicum dicunt, esse tandem intellexerunt. Is tamen inclementer populum habebat, ut propè dicam omnes per ea loca et vicina illis prosterneret. Quosdam enim in viâ, cum iter facerent, sustulit; quosdam domi ostia et fenestras reserando interemit; quosdam per lusum atque jocos parùm joculariter jugulavit; per jejunia quosdam, quosdam per saturitatem abripuit; in somno aliquos, nonnullos vigiles interfecit: usque adeò, ut ex multis ejusdem familiæ, pauci à febre incolumes perstiterint: ex paucis, nulli plerumque intacti evaserint. Ex his alios brevi momento, alios unius, daurum aut trium, alios quatuor, aut eo amplius horarum spatio, postquam sudare cœperant, de vitâ sustulit. Sæpiissime qui in prandio hilares erant, sub cenam mortui fuerunt. Sed nemo qui devicto malo superfuera, ante horas viginti quatuor quam citissimè mali molestiâ et periculo liberatum se gloriari potuit. Itaque ex talibus initiis in dies ingravescentibus, ubi acerbiora incrementa, longius latiusque se fundente malo, subsecuta sunt vix credas quis pavor, quantus metus omnes Britannos invasit; præsertim cùm ejus conditionis miserandæ, quæ tum urgebat, contemplatio funestaque mortis imago nullis spem vitæ (cujus usura omnibus solet esse carissima) non ademerit. Neque enim morbo ulla clementia fuit, nec ullum miseris mortalibus securum refugium. Etenim nusquam non populabatur, nusquam non sæviebat malum. Alios qui se vivos ab hominibus relegarunt, eosdem mortuos in publicum revocavit. Alios conclusos ac penè abditos, contagione enectos in apertum reduxit. Neque sensere id malum fœminæ aut servitiæ, plebesque humilis aut mediæ solum, sed proceres etiam cùm notum sit æquo pede nobiliumque turres humiliumque casas id pulsasse iniquis tamen modis, ut dicemus postea. In eo hic conquerebatur se siti premi, ille ardoribus consumi, omnes sudore confici. Hunc rursùm amentia cœpit, hunc gravis sopor oppressit, hunc inquietudo exagitavit. Hic moribundus ingemuit, ille animam expiravit. Et qui valebat dudum jam febrescebat, versâque vice, qui ante morbo laborabat, nunc aiterius sanitatum procurabat. In summa, ita nulli ferè hominum perpeccit, ita in orbem crudele malum rediit, ut qui alios operâ officioque juvissent priùs, eos vicissim ab illis subsidium officiumque mutuum petere; et contrâ, qui ab aliis essent adjuti, eos sine quiete, magnâ fætigatione operam mutuum præbere, inque vices gravi periculo colla sub jugum mittere cogeret. Jam verò de fugâ (quæ aliàs in pestiferis morbis solet esse præsidio), cogitare au in alium locum commigrare, inane et supervacuum planè fuit. Nusquam enim tutus portus nostris, nulla ex mutato loco securitas erat, quod nulla malo oberranti omnia requies esset."

The author then describes the frightful disorder occasioned by this dreadful epidemic. He says, "he knows not how many deaths it caused," but he adds (p. 15): "In unâ civitate pauculis diebus plus minus sexaginta suprâ noningentos crudeli morbo intercidiisse."

Farther on he expresses himself in the following terms in regard to the origin of the sudor anglicus: "Hic enim morbus, sic ut adventitius non est, ita novus non est. Si quidem ex historiis britannicis intelligo, malum hoc ex Britannia ortum esse (quantum scire licet), in exercitû Henrici regis Angliæ ejus nominis septimi, quem partim ex Galliâ tunc nuper secum adduxerat, partim a Walliâ propter *Milfordiam*, quo classe appulit conscripserat: exercuisseque nostros per anteacta tempora, afflxisseque eo quo dixi modo per intervalla quinquies: anno scilicet 1485, primo ab Augusto mense inito, ad octobrem ultimum; iterùm 1506, æstivo tempore; tertio 1517, a julio mense, ad decembrem medium; quarto 1528, per omnem æstatem; quinto denique, anno hoc quinquagesimo et altero suprâ sesquimillesimum, ad menses quinque et eo amplius."

1454. The picture he presents of the symptoms of the disease contains several remarkable passages (p. 23): "Primo insultu, aliis cervicibus aut scapulis, aliis crus aut brachium occupavit. Aliis sensus erat veluti spiritus, aut flatus calidi per membra ea discurrentis. Una cum his subitus et sine manifestâ causâ huic morbo insuetis, largus sudor manavit. Interiora calebant primo, postea ardebant, calore jam indè ad extimas corporis partes diffusio. Sitis ingens, jactatio inqui-

cta. Cor, jecur, atque stomachum malè morbus habuit. Omnia subsecutus est gravis dolor capitis, vanum loquaxque delirium, post marcor, et inexpugnabilis penè dormiendi necessitas.

"Rursùm, aliis principio cohibitus sudor est, frigeabant membra leviter. At postea erupit idem promotus, sed odore gravis, calore in alio alius pro humoris ratione, quantitate subindè diminutus, subindè copiosus, substantia crassus. Aliis nausea, aliis vomitus erat, sed perpauca, et penè solis ex cibo saturis. Omnes spiritum gravem ac frequentem, vocem gemebundam expeditere. Urina colore tincta leviter, substantia crassior, levamento ambigua (nulla enim erat naturæ regula propter veneni impetum), cætera pro naturali. Pulsus, si quis prætentet, concitior, frequentior; hæc certa morbi indicia erant." (*Joannis Cuii Britanni De Ephemerâ Britannicâ. Liber unus summâ curâ recognitus.* Londini, 1721, 8vo., p. 9.) Vide an analysis of the investigations of Hecker on the *sudor anglicus*, by Ch. Martins. (*Revue Médicale*, août, 1834.) (a)

## EPINYCTIS.

1455. Hippocrates mentions numerous eruptions of *epinyctis* (*ἐπινυκτίδος πολλῆς*; De aere, locis et aquis), and many ulcers consequent upon these *epinyctides* (*Prorrhæti*, lib. ii. sect. 2. p. 95).

Celsus expresses himself as follows: "Pessima pustula est quæ *ἐπινυκτίς* vocatur: ea colore vel sublivida, vel subnigra, vel alba esse consuevit. Circa hanc autem vehemens inflammatio est; et cùm adaperita est, reperitur intus exulceratio mucosa, colore humori suo similis. Dolor ex eâ supra magnitudinem ejus est; neque enim ea fabâ major est. Atque hæc quoque oritur in eminentibus partibus, et ferè noctû undè nomen quoque à Græcis ei impositum est. In omni verò pustularum curatione primum est multum ambulare, atque exerceri; si quid ista prohibet, gestari. Secundum est cibum minuere, abstinere ab omnibus acribus, et extenuantibus; eadem quoque nutrices facere oportet si lectens puer ita affectus est. Præter hæc is qui jam robustus est, si pustulæ minutæ sunt, desudare in balneo debet, simulque super eas nitrum inspergere, oleoque vinum miscere, et sic ungi; tùm descendere in solium. Si nihil sic proficitur, aut si majus pustularum genus occupavit, imponenda lenticula est, detractâque summâ pelliculâ, ad medicamenta lenia transeundum. Epinyctis post lenticulum rectè herbâ quoque sanguinali vel viridi coriandro curatur. Ulcera ex pustulis facta tollit spuma argenti cum semine fœni Græci mixta, sic ut his in vicem rosa atque intubi succus adjiciatur, donec mellis crassitudo ei fiat. Propriè ad eas pustulas quæ infantes malè habent, lapidis quem pyriten Græci vocant, cum quinquaginta amaris nucibus miscetur; adjiciunturque olei cyathi tres: sed priùs ungi ex cerussâ pustulæ debent, tum hoc illini." (*Celsus, De re medicâ*, lib. v. sect. xxviii. 15.)

Lorry says he has never seen the epinyctis, such as it is described by the ancients: "Mihi vero epinyctidem qualem veteres medici describunt, sero periodicè dolores concitantem atroces, de die quiescentem, videre nunquam contigit." (Lorry, *De morbis cutaneis*, p. 263.) Neither have I myself met with a similar combination or succession of symptoms. Alibert, in his description of epinyctis, has included the itchy bites of various insects, and the nocturnal eruptions which appear to be analogous to urticaria or to lichen urticatus.

(a) The work of Hecker, referred to by M. Rayer, has been translated by Dr. Babington, together with the essays by the same author on the Black Death and the Dancing Mania, under the title of the Epidemics of the Middle Ages. The three have recently been printed in one volume by the *Sydenham Society*. London, 1844.

The strictly cutaneous symptoms, of an eruptive character, were few, and were not mentioned generally by the writers on the disease. Hecker quotes *Tyengius in Forest.*, p. 158, "a respectable Dutch physician," for the observation, that "after the perspiration was over there appeared on the limbs small vesicles, which were not confluent, but rendered the skin uneven." "Every thing," Hecker believes, "militates against the supposition that this phenomenon was consistent, or that the Sweating Sickness was an eruptive disorder."



## MENTAGRA OF THE LATINS.

1456. Pliny has described a kind of contagious mentagra which is not seen in Italy at the present day: "Sensit et facies hominum novos, omniq[ue] ævo priore incognitos, non Italiæ modò verum etiam universæ propè Europæ, inorbo: tunc quoque nec tota Italia, nec per Illyricum Galliasve aut Hispanias magnopere vagatos, aut alibi quàm Romæ circàque, sine dolore quidem illos, ac sine pernicie vitæ: sed tantà fœditate ut quæcumque mors præferenda esset. Gravissimum ex his lichenas appellavere. Græco nomine, latinè, quoniam à mento ferè oriebatur joculari primùm lascivia (ut est procax natura multorum in alienis miseris), mox et usurpato vocabulo *mentagram*, occupantem in multis totos utique vultus, oculis tantùm immunibus, descendentem verò et in colla pectusque ac manus, fœdo cutis fuffure. Non fuerat hæc lues apud majores patresque nostros. Et primùm Tiberii Claudii Cæsaris principatu medio irrepsit in Italiam, quodam Perusino equite romano quæstorio scriba, cùm in Asia apparuisset, inde contagionem ejus importante. Nec sensere id malum fœminæ, aut servitiæ, plebisque humilis, aut media, sed proceres veloci transitu osculi maximè, fœdiore multorum, qui perpeti medicinam toleraverant, cicatrice, quàm morbo. Causticis namque curabatur, ni usque in ossa corpus exustum esset, rebellante tædio. Adveneruntque ex Ægypto genitrice talium vitiorum medici, hanc solam operam afferentes, magna sua præda. Siquidem certum est, Manilium Cornutum ex prætoris legatum Aquitanicæ provinciæ H-S CC. elocasse in eo morbo curandum sese." (C. Plini secundi *Historiæ mundi*, lib. xxxvii. Lond., 1587, p. 641, fol.)

## WAREN OF WESTPHALIA.

1457. A disease formerly prevailed hereditarily in Westphalia, among several families, which was denominated *Waren*. The disease, says Henricus a Bra, began with wandering and very acute pains over the whole body, and particularly in the back and loins, attacking one part first, and being then transferred with rapidity to others; leaving the feet, for instance, to fasten themselves in the shoulders, in the arms or in the hands. The pain is compared to what might be supposed to be produced by worms piercing and gnawing the flesh, and it is from this circumstance, indeed, that the disease received its title *waren*, (worms.) Two varieties of it were remarked: in the first, swellings succeeded the pains in the articulations, where they continued for a long time, and became covered with *livid spots*, like those of scorbutus; these spots were apt to degenerate into malignant *ulcers*, especially on the feet, and little worms were engendered in them similar to ascarides. These ulcers very frequently became fistulous. In the second variety, no swelling occurred, but general emaciation or marasmus followed the attack, and atrophy of some part which became paralyzed.

The pains were generally more severe during the night than during the day; they were without fever, or accompanied with very slight slow fever. The bowels were constipated; small worms were frequently seen in the evacuations.

Patients were treated with purgatives, alexipharmics, and anodynes in wine. The tumours were covered with cataplasms of plantago and salt; the ulcers were dressed with cicuta aquatica, bruised, mixed with honey or with a poultice of polypodium, &c., boiled in beer. (Vide Hen. a Bra *de morbo quodam novo et incognito*, Westphalis, Geldris et Frisis quasi endemico, Epist. ad Pet. Forestum, exhibita circa finem, lib. 20, Observationum ejusdem Foresti.) Schenckius quotes another important work upon this disease in his *Obs. Méd.*, lib. vi.: *De novis aliquot morbis*.

## TWELFTH GROUP.

## CUTANEOUS DISEASES OF ANIMALS SUSCEPTIBLE OF TRANSMISSION TO MAN.

1458. Cow-pox, grease, glanders, scabies, and carbuncle, are the

only external diseases of animals which appear capable of being transmitted to the human subject.

## COW-POX.

1459. Cow-pox is an eruptive disease, which appears on the teats of cows, and is capable of being communicated to man, in whom it engenders vaccinia. Cow-pox in the animal presents four periods.

1st period. (*Infection.*) Loss of appetite, repugnance to food; the animals purse up their lips as a man does who blows tobacco smoke slowly out of his mouth; the secretion of milk is diminished; it is more watery than usual; the eye is dull; the creature becomes feverish.

2d period. Three or four days after (*period of the eruption*), hard red elevations as large as a pea appear upon the udder, particularly around the teats; sometimes, but very rarely, others are observed upon the nostrils and eyelids. By and by a yellowish point is perceived on the summit of these elevations, about the size of a pin's head. In three or four days the elevations or spots have assumed the form of flat circular pustules, depressed in their centre and surrounded at their base by a red circle, the extent of which increases gradually. On the fourth and fifth days of the eruption, the animal becomes restless; the pustules grow turbid, and approach maturity, which occurs on the seventh and eighth days of the disease, the third or fourth of the eruption. If the pustules be pressed, the animal shows symptoms of great suffering. The pustules become still larger, always preserving a depression in their centre; they are diaphanous, and acquire a leaden or silver gray colour.

In the fourth period (*desiccation*), the inflamed areola takes a livid colour; the udder becomes deeply indurated under the pustules; at the same time the restlessness of the creature increases; the fluid contained in the pustules grows turbid, gets thicker insensibly, and begins to dry off towards the eleventh or twelfth day. The pustules become brown from the centre gradually towards the circumference; they ultimately appear as dry crusts of a dusky red colour, thick and uniform, which are detached towards the twentieth day, leaving circular cicatrices behind them. (a)

1460. First particularly observed by Jenner, at Berkeley, in the great dairy county of Gloucester, cow-pox has since been seen in several other counties of England, as also in Holstein, Mecklenberg, Saxony, Norway, Prussia, Holland, Spain, Italy and France. (b)

(a) Mr. Ceely (*Observations on the variolæ vaccinæ*), has examined the anatomical structure of the vesicle, and found that "its colour, indurated margin, and central depression, depend on the existence of an adventitious membrane, formed in the corium and secreted by the papillæ. It is raised in the form of a zone, and is intimately connected with the epidermis. It has a cellular structure, in which is secreted and contained a clear viscid lymph. The cells appear to be arranged in two concentric rows, and are separated from each other by whitish radiating partitions, which, at their converging extremities, are united by a central membranous band. The dusky central spot which marked the first change of the pimple into the vesicle, and which has now become darker and more distinct, seems to be caused by a greater or less degree of separation and desiccation of the epidermis, stretched over a crypt-like recess, which contains a small quantity of semi-concrete lymph-like matter, occasionally a turbid opaque fluid. This cellular, adventitious, membranous conformation, though differing in texture and amount in different vesicles, is invariably present, and is not less essential than diagnostic. About the fourth or fifth day of the eruption, or two days before the decline of the vesicle, there often appears at its base a red circle, which gradually increases in extent till that event occurs. During this period, the lymph within the cells having become more abundant and less viscid, and somewhat opaque, bursts and breaks up the cells and their connecting band, separates the epidermis from its attachment to the subjacent adventitious membrane, and the vesicle, losing its central depression, becomes more or less acuminate, presenting a conoidal or semiglobular form."—p. 317.

(b) Since M. Rayer wrote, the natural disease has been observed by M. Bousquet at Passy in 1836, M. Girard at Rambouillet in 1836,



Cows only contract the disease once. Neergaard, Luders, &c., have noticed vaccine epizooties. The disease is transmissible to man, when he has not had small-pox, from which it generally preserves him.

Brown at Sylhet, in Bengal, in 1837, Mr. Eslin in Gloucestershire in 1836, and by Mr. Ceely in Oxfordshire and Bedfordshire.

The natural or casual cow-pox is represented by Mr. Ceely to appear most commonly during the spring, rarely in the heat of summer, though he has observed the disease at all seasons. It is occasionally epizootic, more commonly sporadic, and extremely irregular in the periods of its occurrence, even in dairies situated in the same immediate vicinity, and apparently placed in circumstances in all respects similar. The disease is considered to be peculiar to the milch cow, occurring primarily while the animal is in that condition, and being casually propagated to others by the hands of the milkers. Many intelligent dairymen are inclined to trace its origin to the equine vesicle, but Mr. Ceely has himself never been able to trace it to this source. Different from what is described by M. Rayer in the text, fever or other constitutional symptoms, either in the animals primarily affected or in those to which the disease has been conveyed, are very rarely observed; heat, induration and tenderness of the udder being generally the first symptoms noticed.

The regular duration of the disease would seem to be from twenty to twenty-three days; the eruption appearing about the third or fourth day after exposure, reaching its full development in from six to seven days, and declining in five or six more; the crust separates in about five or six days from its formation, leaving a cicatrix behind.

Mr. Ceely treats of *variola vaccinae*, 1st, as they appear naturally or are produced casually in the cow by the manipulations of the milkers; 2d, as they are produced by vaccination; 3d, by retro-vaccination; 4th, by variolation.

Of the casual cow-pox notice has been already taken. Vaccination of the cow with primary lymph, requires a few words of explanation. "The process followed by Mr. Ceely for the effecting of this object differs from the casual vaccination of the cow by the milkers, in the designated application of the lymph through punctures artificially made on parts selected as being appropriate for its reception. The animals chosen were *sturks* (young heifers), with a view of ascertaining how far other than milch cows were susceptible. Some of these, about ten months old, were vaccinated with lymph taken from a milch cow in the inside of the ear, on the teats, and near the vulva. The punctures in general were early inflamed, but the papular stage was not well marked, and appeared postponed; the vesicles were normal, but declining on the eleventh day. The only constitutional affection observed was a slight acceleration of the pulse. The lymph taken from these vesicles on the tenth day, when transferred to man, produced an affection which differed in no respect from that produced by primary lymph from the milch cow, with the exception that the inflammation and induration at the base of the vesicles were less considerable, and the subsequent scars, though well defined, rather less deep."

Retro-vaccination is the vaccination of the cow with humanized lymph. The animals selected for these experiments were sturks under twelve months old, as cows were difficult to be had for that purpose. The parts selected for the operation were those in close proximity to the vulva, as most easy of access and most suitable in every respect. The lymph used was either dry, or liquid in capillary tubes; and no precautions were taken further than excluding the animals from cold and moisture immediately after the operation for a few hours, or occasionally for a night. Scarcely one-half of the operations succeeded. In the majority of instances, where the vaccination succeeded, the vesicles ran their normal course, and declined on the eleventh day. Four different kinds of lymph were used, each having been current in man for a longer or shorter period. Four of these experiments are given in detail, in order the better to illustrate the particular attendant phenomena; and as one will serve as an example, we give it in the author's words.

"Retro-vaccination with lymph which had been several years in use. — It appeared sufficiently active, and from arm to arm was attended with satisfactory results. *Subject*: a small ill-conditioned sturk,

1461. Observation has shown that there exists a *false* cow-pox, as well as a *false* or *spurious* variola, and vaccinia.

C. G. Kühn (*De morbo varioloso*, 4to. Lips., 1801, p. 82), has collected the chief documents published on these eruptions. He admits

strawberry coloured, thin skin. Seven punctures were made near the vulva, and eight points inserted recently charged with fifth-day lymph from a fine child on the 1st of February, 1839.

"Second day: Nothing remarkable.

"Fourth day: Some of the lower punctures rather red.

"Fifth day: Scarcely any traces of punctures left.

"Sixth day: Punctures appear perfectly passive.

"Seventh day: Two punctures rather elevated and inflamed.

"Ninth day: All the punctures raised in the normal form, but in different degrees, the vaccine tumours being of different sizes; tried to procure lymph, but failed, both on the surface of the tumid margins, which yielded only blood, and in the centres, where there is a slight crust.

"Tenth day: There are four fine large and three small vesicles, from two of which were charged one hundred points, abundantly, with clear adhesive lymph, some of which was used on the same and subsequent days. The punctures made yesterday had given rise to the exudation of lymph which is now visible in the form of light amber-coloured concretions on the parts.

"Eleventh day: The vesicles appear diminishing, and amber-coloured lymphatic concretions are formed in their centres. *Vespere*: Crusts enlarging; vesicles subsiding.

"Twelfth day: Upper vesicles have a pustular appearance in places; others have a yellowish-brown crust; others flattening.

"Thirteenth day: All subsiding; crusts larger.

"Fourteenth day: Subsiding.

"Fifteenth day: Crusts more elevated; margins flatter.

"Sixteenth day: Declining.

"Seventeenth day: Intumescent ring nearly disappeared; black crusts alone remaining.

"Eighteenth day: Every thing diminishing.

"Nineteenth day: Small elevations in the site of the vesicles, still lighter than the ground.

"Twentieth and twenty-second days: Some crusts prematurely removed by accident; others spontaneously fell on the twenty-second and twenty-third days, leaving small pale rose-coloured smooth scars slightly depressed in the centre.

"February 26th: Inoculated with liquid small-pox lymph (*variola discreta*, seventh day), in five punctures, from capillary tubes, on right side of labium pudendi, the wounds being at the same time deluged with fluid.

"Third day: Slight tumidity around the punctures.

"Fourth day: A shining glassy tumidity around the punctures, which are larger.

"Fifth day: *In statu quo*.

"Seventh day: All subsiding; no result.

"March 12th: Re-inoculated with dry sixth-day confluent small-pox lymph, inside and outside the left labium pudendi, with several points; four punctures. Re-vaccinated with seventh-day "*variola vaccine*" lymph, two removes, inside and outside of the right labium pudendi; several points; four punctures. No result from either." — pp. 355–357.

In one of his experiments, no apparent effect was produced on the fourth day, but on opening the punctures, and re-vaccinating with the same matter, vesicles suddenly became developed, without having passed through a palpable and progressive state of papulation, and attained their full development by the tenth day. Analogous occurrences, he remarks, from various causes, take place in man, especially in using primary retro-vaccine and unassimilated lymph; and similar phenomena are noticed in the natural and casual disease in the cow.

The retro-vaccine lymph from these experiments, when taken on points thoroughly and trebly charged, and immediately used, produced perfect vesicles in man. The papular stage, however, was late, being not till the sixth or seventh day. This matter was vaccinated on subjects of different ages, and excepting in respect of the lateness



three species. The first of a deep colour, broader than a Holstein shilling, and depressed in its centre, is filled with thick pus. Transmitted to milkers by inoculation it occasions slight fever, with headache, and pains in the axillary glands. The pustules are painful,

of the papular stage, and in the vesicles themselves being somewhat smaller, did not appear to differ from the matter which had not undergone the transit through the system of the cow; no difference being noticed in local or constitutional symptoms. Even the slight change which it had undergone in its transit through the system of the cow was not apparent after the third remove.

Mr. Ceely concludes, from these experiments, that it is more difficult to vaccinate the cow with humanized than with primary lymph, and that, when vaccination is successful, the disease is milder; that vaccine lymph, therefore, in passing from the cow to man, undergoes a change which renders it less acceptable and less energetic on being returned to the animals of the class which produced it; some, indeed, being incapable altogether of being affected by it. He also remarks that this difficulty of infecting the cow with humanized lymph is not, however, so great as that experienced in passing primary lymph from the cow to man. His experiments also demonstrate that the age of the humanized lymph did not appear to influence its reception in the system of the cow; for provided the lymph was of ordinary activity, and possessed its normal qualities, it succeeded equally well in its operation, whether it had been current in man for only a few weeks, or for many years; exciting in both cases equally perfect and productive vesicles.

As to the question whether the practice of retro-vaccination is of any real value, as a means of renovating humanized vaccine lymph, Mr. Ceely says, "I confess, that from my limited experience, (these few observations and experiments,) I am unable to discover its advantages, or to admit more than its questionable utility, from one transit through the cow. What humanized vaccine might acquire by repeated and indefinite transmissions, I am not prepared to say."

Mr. Ceely, whose opinion is highly valuable, in this alleged degeneration of the vaccine lymph in its passing through many individuals, as he has had frequent opportunities of comparing the primary with the old lymph, coincides in opinion with the correspondents of the French Academy of Medicine, and also with Dr. Griva, of Turin, and his correspondents, and the report of the National Vaccine Establishment, that the vaccine virus has not degenerated. He states that his "own repeated applications to the cow have been chiefly for the purpose of experiment, for the satisfaction of his patients or the accommodation of friends, not from any belief in its superior protective efficacy over active humanized lymph."

On the other hand we are very properly told: "But when lymph is found uniformly deficient in infecting property, vesicles abnormally rapid in their course, at their greatest development on the seventh day, yellowish in appearance on the eighth, with turbid lymph, central desiccation on the ninth, and a miserably small crust falling on the fifteenth or eighteenth day, common prudence dictates its discontinuance, and urges the adoption of a new supply, although constitutional symptoms may not be absent, for *weak* lymph may not be better than *late* lymph." (p. 376.)

To the last source of variolæ vaccinæ, viz., variolation, or the introduction of the virus of small-pox of the human subject in the cow, great interest naturally attaches, as showing the identity of variolous and vaccine matter,—the latter being the former, only modified in its passage through the system of the cow. Of the different experiments performed by Mr. Ceely, the second is the more conclusive. It is detailed as follows:

"*Experiment second.* White sturk, thin skin, [which had been inoculated with small-pox matter fourteen days previously without effect,] February 15th, reinoculated with small-pox virus of the seventh and eighth day (variola discreta), on the left side of the vulva and under fold thereof, as before, and near the verge of the anus. Virus liquid, some pellucid, some opaque and puriform, in capillary tubes, was forced into eight punctures, which were deluged with it; the punctures being afterwards irritated with points deeply charged with the same, which were suffered to remain in the punctures. Third day, nothing remarkable. Fifth day, four upper punctures

ulcerate, and get well with difficulty. The pustules of the second species are not so large, of an amber colour, and filled with a yellowish fetid ichor. The animals suffer more from these than from the former pustules, and the secretion of milk is lessened. Transmitted

near the verge of the anus enlarged and elevated; four on the under fold of the labium, elevated and red, but less enlarged. Sixth day, all present the appearance of the vaccine vesicle. The four upper are larger, but seem only tubercular; four lower on the under fold of the labium have a deep damask hue, and appear like oval or circular solid elevated rings, with central depressions; from one of these took clear lymph with much difficulty, and scantily charged thirty-nine points. Seventh day, upper tubercles seem diminishing, lower vesicles seem flatter but broader. Eighth day, four upper still appear tubercular, of a lighter colour than their ground; four lower vesicles rather augmented, have a light damask hue. Took lymph again from one of them; the other three, not readily yielding lymph on a careful puncturing, were not further disturbed, from a desire to witness their progress; slight central crusts. Ninth day, the four vesicles enlarging; again opened the inner margin under the daily increasing central crust of the vesicle first opened, and charged twenty points; tubercles diminishing. Tenth day, one of the tubercles rather larger; four lower vesicles increasing. Charged twenty-seven points. Vesicles have a bluish, reddish, glistening appearance; two of them rather red at the base; one or two rather raw on each side. Eleventh day, brown crusts over the centre of the vesicles, which appear declining. Twelfth day, declining, with increasing crusts of a blackish-brown colour, within a slightly elevated margin. Vaccinated in several punctures on the margin of the right labium with many points, well charged with sixth-day retro-vaccine lymph; two removes. Punctures slightly tumid for a day or two, but quickly subsided. No result. March 12th, four scars as large as peas, in the situation of the four vesicles, depressed, pale rose colour. Re-inoculated with small-pox virus (confluent), fifth day, in four punctures, on inside of left labium. Re-vaccinated in three punctures, many points, of fifth and seventh day lymph from a child. No result." (pp. 385-7.)

"The third experiment was a failure. Every precaution to avoid error seems to have been adopted in these experiments; the small-pox virus was taken by Mr. Ceely himself on newly-prepared points which had never been used before; and for the second experiment new capillary tubes were charged: the subjects from which the virus was taken were healthy young men, the pocks being remarkably fine, large, plump, and numerous. The first experiment, which, in consequence of vaccination having been performed on the ninth day of variolation, presents, as Mr. Ceely observes, the application of Bryce's test in the cow, is illustrated by six beautiful coloured plates, in which the simultaneous progress of the variolous vesicle, and of the subsequent vaccine vesicles rapidly overtaking it, is faithfully delineated. The drawings are taken on the tenth, eleventh, twelfth, thirteenth, fifteenth, and sixteenth days of variolation, corresponding with the second, third, fourth, fifth, seventh, and eighth of vaccination, the whole of the vaccine vesicles, as well as the variolous one, being at their height on the fifteenth day of variolation, and manifestly on the decline on the sixteenth. The second experiment is illustrated by seven plates, representing the appearances respectively observed on the fifth, sixth, eighth, ninth, tenth, twelfth, and twenty-sixth days, the last plate showing the smooth pale marks left after the fall of the crusts. Both animals were re-inoculated and re-vaccinated without effect. No indisposition was observed during the progress of the disease; and increased heat and redness of the mucous membrane of the vulva, with slight acceleration of the pulse, were the only symptoms noticed."

Mr. Ceely then proceeds to relate the effects of the lymph, illustrating his remarks by examples and plates. But we shall best convey an idea of his first experiments on this point in his own words. "I had inserted twenty points, charged from the variolous vesicle, on the tenth day, into five children, making four punctures in the left arm of each child, viz., James Bryant, aged two years, in delicate health, dark complexion; Ann Nicholson, aged one year, healthy, fat, florid, but phlegmatic; Henry Gibbs, aged one year and three-quarters, very fair, healthy; Joseph Woodbridge, aged three years, robust and



to the human subject, this *false* cow-pox, produces more serious symptoms than the preceding. These two species were observed by Nissen, a practitioner at Segebert. A third species has been described by Helweg, under the name of *yellow false cow-pox*. It differs from

remarkably florid; George Woodbridge, aged five months, plump and healthy. In all, the punctures were early inflamed; but the inflammation subsided, and the papular stage was late in all—the sixth, seventh, or eighth day before it was possible to determine the probability of any result, when a dark dull red pimple occupied the place of some of the punctures, for many of them failed. Vesicles with areolæ were formed at different periods in each.

“Bryant, becoming ill with diarrhœa soon after vaccination, produced only one vesicle, with an areola at the height on the fifteenth day; the vesicle bluish and remarkably large. Nicholson yielded two fine vesicles with full areolæ, and two papulæ on the thirteenth day. Gibbs had but one vesicle, fine and pearl-like, with fully developed areola on the eleventh day. Joseph Woodbridge had two vesicles, attended with areolæ on the tenth day, which were very extensive on the twelfth, and did not decline till the fourteenth day. George Woodbridge entirely failed. Thus twenty punctures yielded but six vesicles. In all these cases the primary constitutional symptoms were very slight; the secondary proportioned to the extent and character of the areola; hence Joseph Woodbridge suffered severely, had vomiting and delirium. No eruption was observed in any of the cases except his; he had extensive roseola.

“On three subjects, aged respectively eleven years, ten months, and two years and a-half, some of the remaining points were employed; into these, also were inserted, at the same time, points charged with ordinary vaccine lymph. In all three subjects the latter took effect in every puncture; while only five out of eight punctures with the new lymph answered, papulation being tardy as before; while the old lymph advanced as usual. As the areolæ of the vesicles from this lymph began to form, the sluggish vesicles from the new began rapidly to advance, and ultimately ran the same course, but did not eventually attain the same size, though perfectly well developed.

“Six points, charged with lymph taken from the vaccine vesicle of the fifth day, on the variolated sturk, were inserted into two subjects at the same time as points charged with lymph from the variolous vesicle of the tenth day. One Emma Churchill, aged five years, produced, from three punctures with the latter, two *papulæ* only; but from three punctures on the right arm, with the former lymph, two very fine active *vesicles*, in which the areolæ began on the ninth day, and was fully developed on the eleventh. In the other case, Richard Tompkins, aged four years, both sets of punctures took effect, but those with the retro-vaccine lymph were more early developed; the areolæ of both commenced on the ninth day, and declined after the eleventh. The symptoms in both subjects appeared on the approach of the areolæ, and were rather severe during its activity. In the subsequent removes of the lymph from the variolous vesicle and the retro-vaccine vesicles, and when propagated from arm to arm, it appeared rather more energetic than the ordinary lymph. Trials were made of both on the same and on separate subjects. In the subsequent removes of the new lymph, in the liquid state, by trials on the same and on different subjects at the same time, it was impossible to discover the slightest difference in its course and effects, whether derived from the variolous vesicle of the tenth day, or the retro-vaccine vesicles of the fifth or seventh day.”—pp. 404–406.

The phenomena presented by the lymph taken from the vesicles produced on the second variolated heifer, were very analogous to those above quoted. It is only necessary to mention that it was found that after the fourth remove “the vesicles were every thing that could be desired, even on a puny, sickly, rickety child, aged two years and a-half.”

In the case of his assistant, Mr. Taylor, who had accidentally inoculated himself from the matter of the single variolous vesicle developed in the first experiment on the cow, he had in consequence modified vaccine with a general eruption of roseola and vesicular or vaccine lichen. This gentleman had been vaccinated in infancy, and had subsequently modified small-pox. With the exception of this case, no attendant eruption was observed by Mr. Ceely in adults;

the two preceding species in its colour, in the nature of the fluid included in the pustules, and in not being contagious. A fourth species signalized by Jenner, differs from the preceding in the absence of erysipelatous inflammation, in the slight degree in which the secretion of milk is affected, and the rapid formation of the crusts. Viborg admits all these species, and describes several others. One of them of a fiery red colour is transmissible to man, and extremely benign; another (warty vaccinia) shows itself first upon the teats under the form of small hard white bodies, like mustard seeds, which increase in size, become reddish on the flesh-coloured teats, and livid on the black, and secrete from their bottom matter of a yellowish colour. The fever accompanying this species is not very intense; and the milk does not decrease in quantity unless the eruption be extremely abundant. At the height of the disease the teats become inflamed and painful, and the animal will hardly suffer itself to be milked. The disease is transmitted from one cow to another, but not to man.

A. F. Luders (*Rem. sur la Vaccine des Vaches de Holstein, Journ. Complémentaire des Sciences Méd.*, t. xxi. p. 53), has also published interesting observations upon *epizootic cow-pox*, and upon *spurious cow-pox*.

1462. I have myself met with an eruption which I conceive ought rather to be ranked among the spurious than the *true* cow-pox. Still it may have been the true disease, the accidental inoculation of which upon the person of a woman who had had the small-pox, produced a modified vaccinia, followed by secondary eruption. I showed the case to M. Bonnet, now Professor of Anatomy at Poitiers, and to M. Leblanc, the distinguished veterinary surgeon, who agreed in opinion as to the vaccinal character of the eruption. Here is the case:

I was consulted at Bellevue, in the month of June, 1829, by a woman, aged thirty-eight, of good constitution, and who had had small-pox, the marks of which she bore about her, who had been attacked during the last few days with an eruption of large pustules upon the corresponding sides of the index and medius fingers of both hands, which she employed to milk the cows she tended, seizing the teats between these two fingers. Three pustules were observed on the ulnar edge of the forefinger of the left hand. Another pustule existed on the same side of the right forefinger, and one upon the radial side of the right middle finger. These pustules, rather distant from one another, prominent, and of the size of a pea, were inflamed at their base, which was of a violet red colour. The broadest of the pustules was somewhat flattened in its centre. The epidermis being detached from the surface of one of these spots, a little blood was discharged, but neither pus nor serum. The spot thus denuded, examined with the lens presented four or five transparent, rounded points like globules of blood, divided from each other by a kind of septa, somewhat opaque. These spots had not been painful on their first appearance; but by and by the patient felt shootings in them as if (as she said), they were going to fester.

I saw the patient three days afterwards. The pustules had increased in size, and now contained a transparent serous fluid, deposited within cells or compartments. I collected some of this fluid, with which I next day inoculated three children, none of whom had any eruption. Three days later, the hands of the patient were tumefied; the fingers especially were excessively swollen; the bases of the pustules were of deeper red and had extended, and the serum they now contained looked sanguinolent. The patient had still gone on milking

nor in any child was there the slightest approach to any thing of a varioloid character. In one case true varicella appeared six days after vaccination at the sixth remove. Roseola, strophulus and lichen were the principal eruptions observed. Supernumerary vaccine vesicles were frequently observed in the proximity of the punctures. This lymph has been extensively used both at the Small-pox and Vaccination Hospital at London, at the Cow-pox Institution at Dublin, at Cheltenham and at Bristol, and found equal to any at present in use.

Not having had access to Mr. Ceely's paper, which is published in the *Transactions of the Provincial Medical and Surgical Association*, 1840, we have made use of the full analyses in the *British and Foreign Medical Review*, October, 1840, and the *Edinburgh Medical and Surgical Journal*, October, 1840.



her cows. The deep red colour of the pustules gave them a pretty strong resemblance to strawberries, though they were smooth and even on the surface. One of the pustules, situated on the middle finger, had discharged its contents almost completely, and the cuticle, loosened and whitish, was still kept moist by the excretion of a small quantity of thick and purulent serum. The patient complained greatly of pain, and was very unwell. During the last two days a *secondary eruption* had made its appearance over the forearms, hands, legs, and several other regions of the body. This eruption was vesicular, generally of the size of millet-seeds, and scattered, nowhere appearing clustered. The vesicles were transparent; their base was not inflamed, and the skin in the spaces between them was not red. They occasioned considerable pruritus, especially during the night. These vesicles, in their interior, presented numbers of small reddish inequalities, similar to what were observed in the pustules of the fingers. On the twenty-fourth day the pustules of the fingers were nearly well; the small vesicles, of the secondary eruption, were opaque and yellowish; a very considerable number were wrinkled on their surface; a few days afterwards the recovery was perfect.

The appearance of these pustules, and their seat upon the edges of the fingers, which were the parts more particularly brought into contact with the teats of the cows, excited my attention, and on the very day when I first observed this eruption, I examined the cows belonging to the family, and on one I discovered an eruption having the appearance of *cow-pox*. On the four teats there existed pustules of a circular form, and of the size of a large lentil. The base of one of these pustules, evolved on the point of the teat where there was no pigmentum, was of a citron-yellow colour, and its centre contained a purulent fluid. This pustule was not umbilicated, but a small black point was perceived on its summit; its base was but very slightly inflamed. The citrine-coloured fluid it contained was rather thick. A second pustule, of larger size than the preceding, contained less serum and more pus. Others were already partially dry. (a)

## GREASE.

1463. Under the name of grease is designated a pustular or vesicular eruption of the lower parts of the legs, and particularly of the

(a) Mr. Ceely points out various eruptive diseases, and spurious pocks, as they are termed, to which milch cows are subject, in addition to the variolæ vaccinae. Among these are the yellow pock, the bluish or black pock, and the white pock. Cases of spurious eruptive disease, communicated from the cow, and mistaken for genuine cow-pock, are frequent in dairy districts, a circumstance meriting the attention of the practitioner residing in them, since by leading to the neglect of correct and efficient vaccination, fatal consequences have ultimately resulted from subsequent exposure to the infection of small-pox.

Of the spurious eruptions liable to be confounded with the genuine vaccine, the white pock would seem to lead to the most frequent mistakes. "On very thick skins, about the sixth or seventh day of its existence, it sometimes appears as a raised, circular, well-defined, firm vesicle, with a small violet or pink areola, and a slight central depression, with a light brown discoloration." On close examination, however, it will be found to be neither cellular in its structure, nor possessed of fluid contents.

The cow, like children, is described as being subject to a purely vesicular eruption, consequent upon vaccine fever, which often bears a striking resemblance to vesicular varicella. This usually occurs about the ninth or tenth day of the vaccine, in the form of erythematous-papular elevations of different sizes, solitary, or in groups, evidently of sub-epidermic origin, which, within twenty-four hours, contains a pellucid serous fluid, which raises the epidermis. On the second day the fluid is straw-coloured and turbid; and before the fifth the vesicles are desiccated with brown and black thin, brittle crusts, which speedily fall. They often continued to form and desiccate for three or four weeks. Several eruptions were noticed as occurring at this period; but none of them so liable to be mistaken for the vaccine as the white pock.

pastern, of several species of animals, but more particularly of the horse.

This affection is ushered in by symptoms of uneasiness and of fever. The eruption then makes its appearance. The hair of the parts affected looks bristly; the size of the limb is increased, and has a great tendency to enlarge; the animal rubs the diseased leg against the others, and tries to bite it; he often lifts the affected member, especially if it be a hind leg. Examined closely, vesicular or pustular elevations may commonly be perceived, but still more frequently a discharge of a serous fluid having a peculiar smell, from a number of small orifices situated at the roots of the hairs. The redness and the discharge increase; the hair is thrown out, excoriations and chaps are formed, to which sores succeed, that pour out a faint smelling or fœtid discharge, and upon the edges of which soft and fungous-looking excrescences sprout up.

Jenner was of opinion that the accidental inoculation of the matter discharged in this disease, was the determining cause of cow-pox among cows. This idea was combated by Woodville, Simmons, Coleman, Buniva, Luciano, Bertholini, and others, who all tried, but in vain, to inoculate the virus of grease upon the teats of the cow. Other observers, Godine, Tanner, Lupton, Loy, Laffont, and Sacco, from repeated experiments, have held themselves bound to adopt the views of Jenner. But several of them, and particularly Saco, maintain that the virus of grease is not the only cause of cow-pox, and that it may be evolved spontaneously among cattle. The following fact, observed by M. Husson, appears conclusive. A coachman, who had never had small-pox, and who had, within a few days, dressed the leg of a horse affected with grease, came to consult the surgeons of one of the dispensaries of Paris, on account of a number of spots or pustules which had been evolved on his wrists, and were exactly like those of vaccinia. This resemblance struck the surgeons, who immediately inoculated two children with the fluid from the pustules of this coachman's wrists. Vaccinia, of the most regular kind, ensued in both of these children, and the virus was used again and again to transmit this disease. A third child was afterwards inoculated with the matter of one of the crusts from the coachman's wrist, and had regular vaccinia, which, eight days afterwards, served to commence an indefinite series of vaccinations.

1464. I think it right to observe that in all probability the whole of the affections designated as *grease* are not of the same nature. Several cases of grease which I have examined bore a stronger resemblance to impetiginous eczema than to any other disease.

1465. On this subject,—the relation of *grease* to cow-pox, consult Jenner's *Inquiry into the Causes and Effects of Variolæ Vaccinae*, 8vo. Lond., 1798; Loy's *account of some experiments on the origin of cow-pox*, 8vo. Lond., 1802; Sacco's *Trattato di vaccinazione, con osservazioni su'l giavardo e vajuolo pecorino, con quattro tavole miniate*, 4to. Milan, 1829; and Husson's article: *Eaux aux Jambes*, in Dict. des Sc. Médicales. (a)

## CARBUNCLE (CHARBON).

1466. M. Hurler d'Arboval relates (*Dict. de Méd. et Chirurg. Veter.*, in art. *Typhus charbonneux*), that a veterinary surgeon, opening the body of an ox which had died of *typhus charbonneux*, imprudently carried his hand soiled with blood to his face naturally covered with spots; on this there followed an *erysipele charbonneux* accompanied with shivering fits, nausea, syncope, &c., so that the man died. A woman who had introduced her arm into the rectum of a horse, labouring under carbuncle (*charbon*), to remove the accumulated excrement, died very shortly afterwards of the same disease. A veterinary surgeon having removed a *tumeur charbonneuse* whilst suffering with a wound on his hand, contracted the disease and died.

(a) Numerous cases are recorded of a similar kind to the one mentioned in the text, of the propagation of vaccinia from the pustules of the lower part of the legs of a horse. But it must be borne in mind that this result can only follow the inoculation with the matter from one specific kind, of the many varieties of eruption, designated vaguely by the term grease.



Two men having bled a bull from the neck affected with a charbon, of the nature of those which are held very malignant, were afterwards affected with a considerable swelling of the right arm, and a number of livid spots, in consequence of the contact of the blood with this part. Shortly afterwards they complained of weight about the heart, (*maux de cœur*), and violent fever, and became exceedingly ill. A woman, after having bled a sheep which died of charbon, having let two drops of blood fall on her hand, two malignant pustules were evolved on the places. Petit instances the production of an *affection charbonneuse* in two children, by the intermedium of a cloth which had been used to cover the skins of some animals dead of charbon.

## SCABIES OF ANIMALS.

1467. According to the testimony of several writers worthy of credit, the *itch* of animals, a contagious disease in which a species of *acarus* is observed, may occasionally be propagated to man. We are even informed that these cases of itch are much more severe than ordinary scabies, and the same remark has been made in regard to scabies transmitted from one species of animal to another.

1468. The itch of the horse (*roux vieux*) is principally situated upon the neck, especially on its upper part near the insertion of the mane. It is characterized by the evolution of small spots hard at their base, vesicular on their apices, extremely numerous and very closely crowded together. Incessant itching leads the animals to rub themselves one against another, or against their stalls, trees, &c.; by this means they sometimes excite excoriations, which in healing become covered with dry crusts, or with squamæ which are detached in the shape of dust. In examining this dust in the sun or in a warm place, a number of shining transparent insects, which move with rapidity, may be perceived in it even with the naked eye. This is a species of the genus *acarus* of which Raspail has given an accurate figure and an excellent description (vide his *Nouv. syst. de chimie organique*, p. 509, 8vo. Paris, 1833, and the *Lancette Française*, 13me Août, 1831).

R. Fauvet gives the following case: In the month of January, 1820, a farmer bought a horse affected with the itch (*cheval galeux*) at the market of Bergamo, which he mounted to return to his home. The day after his arrival he experienced great itchiness over almost the whole of his body; the same symptom was farther complained of by his son and a friend who had accompanied him to market. The stable boy, too, to whom the horse was given in charge, began to scratch himself incessantly within two days; so did a labourer who had used the brute in some field work during a few hours, and this went on till more than thirty persons and several other horses attached to the farm were infected with itch. The mangy animal was, therefore, got rid of, and being sold to a miller, he and his men were forthwith attacked with itch merely from having put their hands on the back of the purchase; a cow, also, which had rubbed her neck against the manger of the horse, contracted the itch like the rest.

The scabious character (*caractère psorique*) of the eruption communicated, was ascertained by several distinguished physicians and surgeons (*Revue Médicale*, t. x.).

Messrs. Dumeril, Geoffroy St. Hilaire, Bosc and other naturalists have borne testimony to the fact of a quadruped (*un phascolome*) which was affected with itch when placed in the Jardin du Roi, having infected the man who was ordered to preserve the skin (the animal having been accidentally killed by the elephant), with a very decided scabies.

The vesicles which characterized the disease of the phascolome contained insects of much larger dimensions than the *acarus scabei* of the human subject; neither did they degenerate transferred to the man who has been mentioned; they occasioned vesicles of greater magnitude than common, which were attended with pruritus of the most intolerable kind, and considerable redness of the skin. Sulphur, the true specific in ordinary scabies, was found equally efficacious in the present instance, and soon restored the individual to health.

Several instances of the itch of dogs having been communicated to man have been mentioned, but unaccompanied with perfectly irrefragable proofs.

## ERUPTION FROM TOUCHING THE SKIN OF A LIONESS AFFECTED WITH A DISEASE OF THE SKIN.

1469. Captain Nonencourt, of the *Echo*, arrived at Brest, from Senegal, having on board a young lioness, labouring under a scabious affection of the skin, and a chronic diarrhœa which before long proved fatal. A man of the name of Dupont, who skinned the animal, was attacked, the night after the operation, with an insupportable itchiness which was followed, by and by, by the appearance over the back, shoulders and legs, of a considerable eruption of little red, pyramidal elevations containing a serous sanguinolent fluid. The eruption on the back disappeared under the use of certain remedies, and that on the other parts was in a state of desquamation, when the treatment was discontinued. On the 23d of September, Dupont felt a considerable degree of itchiness in the head during the night, and next morning he found his forehead, eyebrows and ears covered with pustules, similar to millet seeds. The face, too, was so thickly beset, and so much swelled that the nostrils were obstructed. The eruption continued for three or four days in this state. The pustules then burst, and poured out a sharp fluid, which dried up into a thick crust, that covered the face like a mask. The desquamation commenced on the sixth day; the crust fell off in large flakes; the denuded skin looked red, and only recovered its natural colour slowly.

A person of the name of Bertin stuffed the skin of this lioness. Two days afterwards his eyelids swelled during the night, and a pustular eruption broke out which spread over the whole of the face, the skin of which generally presented an erysipelatous redness. The eruption disappeared from the face by and by, but attacked the hands and shortly afterwards the soles of the feet; on the fourth day it fastened on the thighs. It was accompanied with violent and incessant itchiness. The thighs were covered with broad pustules. They burst, and were succeeded by thick crusts which fell off after a time. Shortly after this, Capt. Nonencourt himself began to complain of being affected with a scabious eruption. The formation and detachment of the incrustations put an end to this disease in the three persons affected. The skin, after this process, continued red and shining, but without ulceration.

Drs. Duval and Coxil Saint Vincent made use of the same remedies in these cases, namely, sudorifics, bitters, sulphur, sulphureous baths and purgative medicines, with success. Dr. Saint Vincent at the same time made use of mucilaginous anodyne and saturnine lotions to appease the pruritus and lessen the irritation of the skin.

## GLANDERS.

1470. Acute glanders occurs in the horse and the ass with the following characters:—the pituitary membrane is very red, and highly inflamed; small eroded points soon appear and spread into foul and cankerous sores with thick and raised edges; the lips and point of the nose are sometimes swelled; the ulcers extend, and discharge a fetid purulent matter, with which a quantity of sanguinolent sanies is from time to time mingled. The mucous membrane becomes gangrenous. The discharge continues in greater quantity than ever; the sublingual glands are painful; the conjunctivæ and eyelids, at first inflamed and injected, assume a violet colour, swell, and a discharge takes place from between the eyelids; the inflammation then extends to the surrounding parts, the breathing becomes laborious, and the animal dies within a few days. If the disease has not now its termination, the inflammation declines and passes into the chronic state. Pustules and gangrenous spots then occur over the face, the extremities swell, and ulcers and abscesses are formed in their substance. In a stable of eighteen horses and three asses attacked with glanders, Dr. Elliotson informs us that ten horses died within the few first days of the disease; four after the first violence of the symptoms had subsided, and the disease had continued apparently stationary for two months; the seven others which survived, presented all the symptoms of chronic glanders. They were sent into the country where they worked for nearly a year, at the end of which time they were killed.

It is long since glanders was familiarly known to be a highly contagious disease among animals of the same species; but it has only



recently been discovered that acute glanders accidentally inoculated upon the human body, give rise to very serious symptoms, to a disease, in fact, analogous to the glanders of the horse.

Dr. Elliotson has studied this point of pathology particularly, and has thrown much light upon it by his researches. He reminds us of the case related by Mr. Travers, of a student who lost his life from accidentally puncturing his finger whilst engaged in dissecting the head of an ass affected with glanders. He died with abscesses in the arm, lungs, kidneys and knee-joints. An ass inoculated with the matter from the abscess in the arm, by Professor Coleman, contracted glanders, and died twelve days afterwards.

Two other cases, the particulars of which Dr. Elliotson has detailed, are still more remarkable:

Thomas Maskall, aged seventeen, presented the following symptoms:—The upper half of the face, including the eyelids and the nose, with the portion of the cheek on each side, especially on the right, was greatly tumefied, so that the eyes were closed. The eyelids and swollen portions of the cheeks were red and hot, dry and shining, but the nose was dark-coloured, and on its right half, black, cold, and senseless. From around the gangrened portion of the nose and some other points a little pus was oozing, as well as a thin dark-coloured fluid, and from the nostrils a thick discharge of a deep yellow colour, here and there a little bloody, was taking place, exceedingly copious from the right nostril. Several hard phlyzacious pustules existed on and immediately around the nose, still principally on the right side, and in various parts of the trunk and extremities. Tumefactions were observed in both forearms and in the back of the right hand. Some of these were hard, others softening into suppuration. The temperature was high; the pulse 136, and sharp: the tongue white, and rather dry. The respiratory murmur was indistinct on the right lower part of the chest, and the respiration quick and difficult. The gums were slightly turgid. He died next day; on opening the body there were proofs of a violent pleuropneumonia in the lower part of the right side, and two ounces of healthy pus were found between the adherent lung and diaphragm. A dark red patch existed in the stomach, and several at irregular distances throughout the intestines. The mucous membrane of the stomach was very lacerable at that spot. The other viscera, and all the contents of the head as well as the veins of the extremities, were reported healthy: but the mucous membrane of the nostrils was not examined. The abscess which had been opened in the back of the right hand communicated with the joint of the metacarpal bone of the middle finger, but those on the arm did not communicate with the elbow.

On Friday, the 26th of the following June, it being my week to admit patients, I was surprised to find another young man, named Thomas Dixon, and twenty-one years of age, lying in bed in William's ward, with the same symptoms as the former.

The nose and surrounding parts were exceedingly swollen, so that the left eye was closed completely, and the right nearly. The tumefied parts were hot, and of a bright red, with the exception of an inch of the left half of the nose, which was of a mulberry colour: a profusion of deep-yellow tenacious mucus, with a few streaks of blood, exuded from each nostril, but particularly from the left. Several hard phlyzacious pustules existed on the nose and adjacent parts, on the arms, thighs, and legs, and each was surrounded in the latter situations by a blush of red. A patch of the same colour was observed on the left elbow. The temperature of the surface of the abdomen was 107°. The pulse 144, broad, soft, and weak, so as to be rather an undulation than a pulsation. The respiration 30, and so shallow that the chest scarcely appeared to move. The tongue was dry and rough, and of a brownish red. The skin sweated copiously. He gave rational answers in a fluttering voice, but immediately afterwards always fell into a little incoherence. His movements were tremulous, and though otherwise exceedingly tranquil, he tossed his arms about, and requested that his wrists might be tied together to prevent this involuntary action. He complained of coldness in the lower extremities, which, however, were sufficiently warm, though cooler than the rest of the body. This patient also died. On opening the body, many parts of the lungs were gorged with blood and frothy fluid, and the corresponding bronchial branches were very dark; numerous papillæ, with pointed black summits, were seen at the end of the ilium,

and clusters of minute grayish-black points throughout the small intestines, and most abundantly at the commencement of the duodenum; the walls of the left ventricle of the heart were very thick: but nothing was detected, either peculiar or important, or calculated to throw the faintest light upon the disease.

1471. Dr. Elliotson having contrasted the symptoms of these two cases with those presented in a young soldier, the detail of which is given by Mr. Brown, surgeon of the second regiment of Dragoons, under the title of, *A fatal case of acute glanders in the human subject* (London Medical Gazette, vol. iv. p. 134), was immediately struck with the resemblance which the whole of the three cases bore to one another, and forthwith instituted inquiries to ascertain whether or not his own patients could have had any intercourse with glandered horses. The result of these inquiries were next to certain evidence that they had. Some time afterwards Dr. Elliotson had a case communicated to him by Mr. John Parrot, in which there was no doubt of the patient having been in contact with a glandered horse. Mr. Brown's case, moreover, was quite decisive upon this point. The circumstances are as follows:—A fine healthy corporal in the 2d regiment of Dragoons, aged thirty-eight, suddenly awoke, while stationed at Caher, in Ireland, in the night of the 16th of April, with rigors, headache, and slight irritability of stomach, which in the morning were joined by depression of spirits, general disturbance, and stiffness and severe and constant pains of all the large joints, aggravated on the slightest motion. The pains increased to an alarming degree, but especially in the left shoulder, which was somewhat tumefied at the scapula, but not inflamed. On the 24th, the tumefaction was considerable, and of a livid hue. Similar swellings, but smaller, took place on the arms, legs, thighs and sacrum; all, like it, hard, insensible, and of a chocolate colour, and at first a slightly discoloured puffiness only, but becoming, after twelve or fifteen hours, of a deep vermilion, and soon of a dark brown; the integuments growing thick and callous, slightly cracking, and exuding a thin and acrid sanies. One precisely similar, and of large size, appeared upon the left temple, and the eyelids became tumefied. "The right nostril was gummed with an inspissated discharge." The "posterior fauces" were much inflamed, and nearly of a purple hue. On the 28th, several "wartlike pustules," acquiring about the size of a pea, rose high above the skin, in various situations around each of the tumefactions, particularly numerous and large over the right side of the neck and shoulders, and on the inside of the arms and thighs, and were found after death to be filled "with a violet-coloured inspissated lymph." The thirst was always great, the tongue foul and parched: the pulse from eighty-eight to ninety-six, full, but easily compressed; the blood, abstracted at the commencement, buffed, but much attenuated; the urinary and alvine excretions "always natural in every respect." "The copious exhibition of tonics and antiseptics" had not the slightest effect: and at the date last mentioned,—the 28th, many of the tumours, particularly that upon the shoulders, were rapidly running into gangrene; the pulse was scarcely perceptible, the surface bathed with a cold, clammy sweat; imperfect stupor, and mild muttering delirium occurred, and he died upon the morning of the 30th.

Neither the thoracic nor abdominal viscera presented any vestige of disease, but, as there was in this case no impediment to a full examination, the head, extremities, and walls of the trunk were carefully inspected. A cluster of tubercles was found in the cellular membrane, exterior to the pericranium of the left superciliary ridge, and in the right frontal sinus, according to the veterinary surgeon of the regiment, exactly similar to those observed in the frontal and other sinuses of the horse after acute glanders. On dividing the various livid tumours of the surface down to the bone, "the muscles appeared perfectly decomposed, and of a dark liver colour, exhaling a peculiarly fetid odour, with points of purulent matter, as it were infiltrated everywhere through their entire substance, resembling much a hepatised or tuberculated lung;" and under each "was a cluster of gray circular tubercles, the whole composed of fine cellular tissues, enclosed in small cysts, proportionate in size and consistence to the extent and duration of the tumour, and firmly attached to the periosteum." The muscles generally, even perhaps the heart, appeared



pale and flabby, "and the cellular membrane infiltrated with a yellow serosity."

"It appeared that the patient had had the sole charge of a glandered horse for some time, which had been destroyed on the very evening of his attack; and that he had skinned him, and exerted himself a good deal in cutting up and burying the carcass. But these circumstances did not at first create the least suspicion, and his complaint was considered a very severe case of acute rheumatism, and treated as such."

1472. These data on glanders in man are derived from Dr. Elliotson's first paper on this subject inserted in the sixteenth volume of the *Medico-Chirurgical Transactions*, published in 1830. In 1833 the same gentleman gave to the public an additional number of observations on the subject. (*Additional facts respecting glanders in the human subject*, 7th March 1823, which were republished in two of the French periodicals, *Journ. de Méd. Vétérinaire*, 1832, p. 124; 1833, p. 427; and in the *Lancette Française*, 1833, p. 384.)

Dr. Elliotson was afterwards informed that two cases, similar to those he had seen, were recorded in the eleventh and seventeenth volumes of *Rust's Magazin für die gesammte Heilkunde*, 8vo. 1821, 1824, to which he refers particularly. The cases in the first of these volumes are noticed in the *Journal der Praktischen Heilkunde*, for March, 1822.

M. Vogeli, of Lyons, has also given several cases, one of which particularly, that, namely, of Pierre Couderac, appears to me analogous to those seen and related by Dr. Elliotson (*Quelques faits tendant à établir la contagion du farcin du cheval à l'homme*. *Journ. de Méd. Vétérin.*, January, 1825).

It would, therefore, appear satisfactorily demonstrated, that glanders is communicable to man; first, by the perfect similitude and uniformity of the symptoms in all the cases in which inoculation was ascertained; by the peculiarity of the symptoms, and their distinctness from those of every other disease; by the exact correspondence of the morbid alterations discovered after death, with those encountered in the bodies of horses labouring under acute glanders; and, finally, by the actual excitement of glanders in asses, inoculated with matter taken from the sores of two different individuals, who died with the peculiar symptoms mentioned.

This rare disease is represented in the Atlas, after drawings, for the correctness of which Dr. Elliotson vouches. The cases, the experiments, and the learned researches of this gentleman, on glanders, are replete with interest. (a)

(a) Within the short period that has elapsed since M. Rayer wrote the above brief notice of Glanders, large contributions have been made to a better knowledge of the disease, and by few with more effect than the author himself; first, in a paper entitled *De la Morve et du Farcin chez l'Homme*, 1837, in the *Mémoires de l'Académie de Médecine*, and afterwards in an essay, jointly by him and M. Breschet, *De la Morve chez l'Homme, chez les Solipèdes, &c.* (*Compte rendu de l'Académie des Sciences*, 1840).

Among the German writers on this disease may be mentioned Dr. Eck (*Beitrag zu den Erfahrungen über die Schädliche Einwirkung des Rotzgifts auf Menschen*, 1837). Dr. Graves, also, makes glanders and button farcy the subject of one of his clinical lectures (*Graves and Gerhard*, p. 313, Philad. edit). Several cases of the disease in the human species have been recorded of late years in the Medical Journals, some of which I shall soon notice more particularly. I must mention, however, at this time, two valuable papers, containing much valuable information on the subject, in the *British and Foreign Medical Review*, vol. vi. 1838, and the *Edinburgh Medical and Surgical Journal*, 1840. But the fullest monograph of glanders and farcy which has yet come under my notice, is the essay of M. Tardieu (*De la Morve et du Farcin Chroniques chez l'Homme et chez les Solipèdes*. Paris, 1843), dedicated to his former preceptor, M. Rayer.

It was while preparing to make an analysis of this last work that I was induced to write a short monograph of the disease for my *Bulletin of Medical Science*, July, 1843. This article will constitute the staple of my remarks on the present occasion. Now, as then, I shall refer to the admirable work on the Horse, by M. Youatt, whose clinical

experience in glanders and farcy, as they attack this animal, have a direct application to those diseases, when transmitted to man.

*Close connection between glanders and farcy.*—First, we would devote a few words to the connection between glanders and farcy, and the reason for their being regarded varieties of the same disease; attacking, indeed, different tissues, but acknowledging a community of origin:

"'Farcy,' says Mr. Youatt, 'is intimately connected with glanders; they will run into each other, or their symptoms will mingle together, and before either arrives at its fatal termination, its associate will almost invariably appear. An animal, inoculated with the matter of farcy, will often be affected with glanders, while the matter of glanders will frequently produce farcy. They are different types or stages of the same disease. There is, however, a very material difference in their symptoms and progress, and this most important one of all, that while glanders are generally incurable, farcy, in its early stage and mild form, may be successfully treated.'

"M. Tardieu (p. 13) adduces many experiments performed by Albigaard and Viborg, of the veterinary school at Copenhagen, Coleman and White among the English, and Jolivet and Gerard among the French veterinarians, all proving the identity of origin, in their intercommunicableness by inoculation, of glanders and farcy. Wherein, then, consists the differences of these morbid states? M. Tardieu replies, by saying, that the *lesion of the nasal fossæ* is the characteristic feature of glanders, *Morve* of the French, *Rotz* *Rotzkrankheit* of the Germans. All the cases in which this is wanting are those of farcy. Mr. Youatt holds an identical opinion, in his declaring that 'glanders is an inflammation of the membrane of the nose, producing an altered and poisonous secretion; and when sufficient of this vitiated secretion has been taken up to produce inflammation and ulceration of the absorbents, farcy is established.'—p. 137.

"*Post-mortem* appearances clearly point out the anatomical seat of lesions in glanders. 'The nostril is generally more or less blanched with spots or lines of inflammation of considerable intensity. Ulceration is almost invariably found, and of a chancreous character, in the septum, and also on the ethmoid and turbinated bones. The ulcers evidently follow the course of the absorbents, sometimes almost confined to the trunk of the main vessel, or, if scattered over the membranes generally, thickest over the path of the lymphatic. The ethmoid and turbinated bones are often filled with pus, and sometimes eaten through and carious; but, in the majority of cases, the ulceration is confined to the external membrane, although there may be pus within. In aggravated cases the disease extends through all the cells of the face and head.' (Youatt, p. 132.) The extension of the disease to the larynx and trachea, and even, in aggravated cases, down to the lungs, is easily traced; but, as in other cases, there is no morbid affection whatever of these organs, we cannot regard pulmonic alterations as distinctive of glanders. In the chronic variety of this disease, miliary granulations are met with, which have been viewed, erroneously, as analogous and even identical with tubercles in the lungs of the human subject. M. Rayer, in his examination of this point of comparative pathology, affirms that the granulations in glanders are different in their origin, progress and termination, from the true tuberculous granules in man (Tardieu, p. 42).

"Among the *symptoms* of glanders, the earliest is 'an increased discharge from the nostril, generally the left, small in quantity, constantly flowing, of an aqueous character, and a little mucous constantly mingling with it.' Mr. Youatt, who gives this definition, adds, with earnestness, a caution not to wait until the discharge assumes a viscid or gluey character, before the disease is pronounced glanders, or before suspicion even is excited of its indicating the first stage. He admits, however, 'that, in a majority of cases, some degree of stickiness does characterize the discharge of glanders from a very early period.' Swelling of the submaxillary glands follows the discharge, but at an uncertain interval: these are distinct from adjacent tissue, and adhere closely to the affected side. The membrane of the nose is of a dark purplish hue, or almost of a leaden colour, or of some shade between the two, or, if there is some redness of inflammation, it will have a purplish tinge. Spots of ulceration appear in the membrane covering the cartilage of the nose, which



usually approach to a circular form, are deep, and with the edges abrupt and prominent.

"The farther progress of the disease is thus described by Mr. Youatt:

"When ulcers begin to appear on the membrane of the nose, the constitution of the horse is soon evidently affected. The patient loses flesh—his belly is tucked up—his coat unthrifty, and readily coming off—the appetite is impaired—the strength fails—cough, more or less urgent, may be heard—the discharge from the nose will increase in quantity; it will be discoloured, bloody, offensive to the smell—the ulcers in the nose will become larger and more numerous, and the air-passages being obstructed, a grating, choking noise will be heard at every act of breathing. There is now a peculiar tenderness about the forehead. The membrane lining the frontal sinuses is inflamed and ulcerated, and the integument of the forehead becomes thickened and somewhat swelled. Farcy is now superadded to glanders, or glanders has degenerated into farcy, and more or less of the absorbents are involved.

"At or before this time, little tumours appear about the muscles, and face, and neck, following the course of the veins and the absorbents, for they run side by side; and these, the tumours, soon ulcerate. Tumours or buds, still pursuing the path of the absorbents, soon appear on the inside of the thighs. They are connected together by a corded substance. This is the inflamed and enlarged lymphatic; and ulceration quickly follows the appearance of these buds. The deeper-seated absorbents are next affected; and one or both of the hind-legs swell to a great size, and become stiff, and hot, and tender. The loss of rest and strength is more marked every day. The membrane of a dirty livid colour. The membrane of the mouth is strangely pallid. The eye is infiltrated with a yellow fluid; and the discharge from the nose becomes more profuse, and insufferably offensive. The animal presents one mass of putrefaction, and at last dies exhausted."—pp. 130-1.

"Farcy (*Farcin* of the French, *Wurm* of the Germans, *Rogna dei Cavalli* of the Italians, and *Lamparones del Cavallo* of the Spaniards), as may have been already inferred from a quotation from Mr. Youatt, is, he thinks, always necessarily preceded by glanders, however slight the latter may be. Few things, says Mr. Youatt, are more unlike, or more perplexing than the different forms which farcy assumes at different times. 'One of the legs, and particularly one of the hinder legs, will suddenly swell to an enormous size. At night the horse will appear to be perfectly well, and in the morning one leg will be three times the size of the other, with considerable fever, and scarcely the power of moving the limb.'

"At other times the head will be subject to this enlargement, the muzzle particularly will swell, and an offensive discharge will proceed from the nose. Sometimes the horse will gradually lose flesh and strength; he will be hide-bound; many eruptions will appear in different parts; the legs will swell; cracks will be seen at the heels, and an inexperienced person may conceive it to be a mere want of condition, combined with grease."

"Multiplied hard knots and cords, owing to inflammation of the absorbents, are formed in different parts of the skin; some quite superficial, others deeper seated. Abscesses running into each other appear also on the skin, and open into ulcers; but some of them consist of blood.

"As to the *etiology* of glanders and farcy, it has been already distinctly stated, that contagion is an undoubted cause; but it is not the only one. There are two modes of direct transmission; the one by inoculation, or the application of the glanderous matter to an abraded or absorbing surface of a healthy animal, by which it finds entrance into the system, and produces the specific taint and its characteristic effects: the other is by a contaminated air or fumes, caused by the emanations from the glandered animal, acting on the Schneiderian and pulmonary mucous membrane of a healthy one shut up in the same stable. Some may qualify the latter mode of transmission by the term infection. The French minister of war appointed a commission in 1836 to investigate the subject, both of the cause and treatment of glanders. A report of the conclusions arrived at has not yet been made. M. Barthelemy, a member of the commission, relates, however, the following experiment on the question of conta-

gion. Ten horses, chosen by the commission from among the horses of two effective cavalry regiments in garrison at Paris, were put into a clean and healthy stable, with horses affected with chronic glanders: nine out of ten of the first set of horses exhibited symptoms of the disease; and two of four, in which the disease had reached its third stage, have been killed." Coleman, Vibourg and Renaut have shown that the blood of a glandered horse will communicate the disease to a healthy one.

"Still more frequently than from contagion, does glanders originate from general causes acting on the health of the horse; and this, in the history and inquiries into contagious diseases in the human subject, is a fact of deep importance. We have, in glanders, irrefragable proof that the disease originates spontaneously in the animal; but yet, that in its progress virus of a specific nature is formed, capable of propagating the disease, by contagion, to another animal, previously quite healthy, and in which no causes of constitutional disturbance or deterioration had been in action. 'Improper stable management, we believe,' says Mr. Youatt, 'to be a far more frequent cause of glanders than contagion.' The air, changed and deteriorated by respiration of many horses kept together in small and illy ventilated stables, becomes an irritant, or rather a poison, to the nasal membrane. Professor Coleman, of veterinary fame, relates a circumstance in point, which shows also the rapid and fatal agency of the cause in question. In the expedition to Quiberon, the horses had not been long on board the transports before it became necessary to shut down the hatchways for a few hours; the consequence of this was, that some of them were suffocated, and that all the rest were disembarked either glandered or farcied. Glanders may be produced by any thing that injures, or for a length of time acts upon or weakens the vital energy of the nasal membrane; hence the disease has followed fractures of the bones of the nose, violent catarrh, the injection of acrid and stimulating substances into the nostril. Whatever weakens the constitution generally, such as bad stable management, either excessive labour or defective exercise, want of wholesome food, will give rise to glanders. Mr. Youatt very properly remarks:

"Every exciting cause of disease exerts its chief and its worst influence on this membrane. At the close of a severe campaign, the horses are more than decimated by this pest. At the termination of the Peninsular war, the ravages of this disease were dreadful. Every disease will predispose the membrane of the nose to take on the inflammation of glanders, and with many, as shingles, catarrh, bronchitis, and pneumonia, there is a continuity of membrane, an association of function, and a thousand sympathies."

"Among the hygienic agents, the excess or prolonged application of which has been found to be frequently productive of glanders, moisture, or moist exhalations, deserve particular notice. New stables are, on this account, unhealthy, and sometimes give rise to the disease in horses placed in them too early. M. Tardieu, in this part of his subject, refers with great confidence to the opinions of M. Youatt, as recorded in the lectures by the latter, published in the *London Lancet*.

"Hereditary predisposition is referred to by Mr. Youatt among the causes of glanders:

"There is scarcely a disease which does not run in the stock. There is that in the structure of various parts, or their disposition to be affected by certain influences, which perpetuates in the offspring the diseases of the sire; and thus contraction, ophthalmia, roaring, are decidedly hereditary, and so is glanders. M. Dupuy relates some decisive cases. A mare, on dissection, exhibited every appearance of glanders; her filly, who resembled her in form and in her vicious propensities, died glandered at six years old. A second and a third mare, and their foals, presented the same fatal proof that glanders are hereditary."

"M. Latour cites a case, showing direct transmission of the disease from parent to offspring. A foal from a glandered mare exhibited, at birth, two hard glands adhering to the jaw, and it had a whitish flux from the right nostril. Its health was not particularly affected for four months, after which period it was killed; but on dissection deep ulcerations were found in the right frontal and maxillary sinuses, and the cornets were almost completely destroyed.

"The two species of disease now described, have each been divided into two varieties,—acute and chronic; so that we have acute and



chronic glanders, and acute and chronic farcy. This division is applicable to the disease as it occurs in man as well as in the horse."

In proceeding next to describe glanders and farcy in the human subject, we repeat the division already made of both these species, into acute and chronic, but without insisting much on its practical value. The proportion of the first variety is much greater than that of the second. Of 132 cases, of all kinds in man, collected by M. Tardieu, he found that 89 were of the acute, and 43 of the chronic form, or, rather, more than two of the former to one of the latter. M. Rayer (*op. cit.*) indicates three varieties of the acute form of the disease, regarding it (farcy and glanders) as one in its essential characters. These are, the pustular, the gangrenous, and the pustulo-gangrenous.

"In some cases, the most striking phenomena consist of a pustular cutaneous eruption, a thick and glutinous nasal discharge, and a typhoid aspect. In others, the symptoms of nasal lesion are obscure, while the external characteristics (the pustular eruption and gangrenous affection of the skin), predominate. Again, pains in the limbs, purulent deposition in various parts of the body, and inflammation of the lymphatic vessels and glands, form, in the outset, the most striking features of another set of cases, still more strictly analogous in character to the acute farcy glanders of the horse. Lastly, there are others more violent and promptly fatal, in which all these morbid changes and symptoms appear rapidly, and at once, a few days after vague initiatory phenomena."—p. 642.

"His classification, founded on another view of the subject, viz.: the cases caused by inoculation and those by infection, without contact, cannot, as yet, rest on a firm basis, since we are unable to say whether the disease in man has arisen without the positive contact of glanders matter of the horse with some portion of the skin. But, even though this theory of the causation of the disease should not be tenable, a division depending on the physiognomy which would be supposed to indicate the two forms, may still be found convenient; and hence we shall have a disease distinguished from the very beginning by local symptoms, and another variety in which the whole system is affected.

"In acute glanders, caused by inoculation, a short period of incubation occurs, similar to that which follows the application of the variolous or other animal poison, to an abraded surface or wound. This period varies from two to eight days; after which, pain, heat, and swelling occur; the pain soon becomes lancinating; and red lines, or inflamed, painful hard cords extend up the limb, constituting angioleucitis, or inflammation of the lymphatic vessels and glands, with which are associated diffuse inflammation of the subcutaneous cellular tissue, and active feverish symptoms. Often, at this time, there is a lull in the disease, which, so far, may be called farcy, but it is only to be followed by the symptoms peculiar to, and characteristic of, glanders.

"When infection was supposed to originate the disease; that is, when no local sore could be discovered, we find feverish symptoms, rigors, quick pulse and gastric affection or diarrhoea, and pain in the limbs. After the period of invasion, whatever had been the cause of the disease, whether inoculation or infection, its progress was the same, and marked by the following symptoms:

"Articular or muscular pains, in some cases simulating rheumatism, followed by subcutaneous, circumscribed painful swellings (the probable result of angioleucitis), which either undergo superficial mortification, or are converted into abscesses, containing laudable or sanious pus; a yellowish, viscous, nasal discharge, of limited quantity, issuing, in the great majority of cases, from both nares, and first observed from the fourth to the sixteenth day, accompanied, in some instances, by a similar excretion from the mouth or eyelids; occasional tumefaction of the nose and adjoining parts, followed by gangrene in one-eighth of the cases; in very rare examples, swelling of the submaxillary lymphatic glands, or depositions of pus therein; and pretty frequently inflammation of the throat and tonsils; a peculiar pustular eruption, differing from all varieties hitherto observed, viz.: gangrenous bullæ appearing towards the twelfth day of infection, on the face, arms, thighs, and anterior surface of the trunk, and sometimes preceded or accompanied by profuse fetid sweats; rapid and full pulse at the outset, subsequently weak, depressible, and some-

times intermittent, and, as death approaches, extremely small and frequent; diarrhoea, with watery stools of cadaverous smell, and occasionally containing dark-coloured blood; dental sordes; dry, brown tongue; tympanitic abdomen, with hardly any abdominal tenderness; thirst in a few cases; difficult deglutition; occasional vomiting, especially towards the close; no typhoid maculae on the surface; violent cerebral symptoms, terminating in delirium, coma, and death."—*Brit. and For. Med. Rev.*, vol. vi.

"The post-mortem appearances in subjects dead of glanders, though not very minutely described in many cases, demonstrate their perfect similarity in man and the horse. Whenever the nasal cavities have been examined, they have presented the characteristic peculiarities found in the glandered horse. These consisted of ecchymosed and gangrenous spots, a peculiar miliary eruption, compared to minute abscesses of the size of a grain of millet-seed, ulceration, and a deposit of granular tubercles in the sinuses. The nasal membrane itself was usually thickened, infiltrated, and studded with numerous granular tubercles, and covered with a thick, tenacious, puriform discharge. The bones of the nose were sometimes found corroded.

"The larynx and trachea have occasionally exhibited marks of disease, in the mucous membrane being softened, injected and livid, and occasionally covered with a peculiar confluent pustular eruption and a glutinous mucous secretion. In the lungs the appearances are analogous to those met with in lobular pneumonia: they are, also, filled with innumerable brownish or whitish tubercles, varying in size from a hemp-seed to a hazelnut. Small abscesses are occasionally met with in the substance of the lungs. Ecchymosed spots have been noticed on the surface of the heart, liver, stomach, and intestinal canal. The liver has been the seat of abscesses.

"The lymphatic ganglia were usually enlarged, often presenting a red and injected appearance; or they were of a brown colour, soft and friable. Those chiefly affected were under the jaw, along the neck, in the axilla, elbow-joint, and groin. The bronchial lymphatic glands were also very commonly affected. The cellular tissue was always much diseased, being gangrenous in some places, and very generally infiltrated with turbid serous fluid. Here and there small collections of purulent matter had taken place.

"In summing up the diagnosis of the disease, as laid down by M. Rayer, but divested of needless detail and collateral matter, we find that acute glanders may be distinguished from the results of dissection wounds, absorption of pus after capital operations, from ordinary phlebitis, angioleucitis, malignant pustule, carbuncular affections, putrid variola, &c., by the peculiar nasal discharge, pustular eruption, and the property the secreted pus possesses of producing the specific disease in sound animals.

"The treatment of this terrible disease is most unsatisfactory. M. Rayer's statement cannot be formally contradicted, when he says that acute glanders in the human subject has hitherto invariably terminated in death (one doubtful case excepted). Two-thirds of the patients perished before the seventeenth day; two died from the twenty-first to the twenty-eighth day; one only survived to the fifty-ninth. In the latter case the symptoms were those of farcy, on which those of acute glanders supervened, in the same manner as has sometimes been observed in horses. This writer suggests, if the lymphatic vessels and glands are swollen, the immediate incision of the latter; and if the local inflammation following this operation be intense, free incisions and mercurial frictions might, he believes, be serviceable. Excision, however, is seldom practicable to any extent, and the safer practice is that adopted in veterinary surgery, viz.: to cauterize the diseased glands, or other parts, by the red-hot iron. Whatever be the number of abscesses formed, they should be incised, and the cutaneous pustules and bullæ opened and cauterized; while the patient's strength is supported by tonic drinks and generous wine, diluted with gaseous water. M. Rayer is averse to blood-letting, either topical or general; and, on the other hand, he has no opinion of the efficacy of bark, serpentaria, and other alleged tonic antiseptics. He gives a preference to repeated purging, and the exhibition of large doses of acetate of ammonia.

"Not more successful is the treatment of the acute glanders in horses. Marked, as the disease is, in both man and horse, by the same symptoms, and anatomical seat and changes, whatever remedy



is discovered to be serviceable in the one, may, with some degree of confidence, be relied on in the other; and, hence, we watch with interest, all the improvements, in this particular at least, of veterinary medicine.

"Acute or *button* farcy differs from acute glanders, only, in the absence of the nasal affection. The chief symptoms of acute farcy in man are the local inflammation, swelling of the lymphatic glands and vessels, and finally of the whole limb. Numerous small tumours extend, in lines, along the limbs, and terminate in suppuration or gangrene, whilst the inflamed cord-like lymphatics are seen extending from one to the other. Abscesses form over the surface of the body and limbs; gangrenous patches occur here and there; and there is frequently attendant inflammation of the superficial veins. In every case, the peculiar pustular eruption, so characteristic in glanders, is observed. The *post-mortem* appearances correspond precisely with those seen in glanders.

"*Chronic glanders*, in man, is described by M. Tardieu to be a disease resulting from the transmission of the glanders or farcy of the solipedes, characterized by peculiar ulcerations of the nasal fossæ and air-passages, pains of the joints and museles, general symptoms of cachexia, accompanied most commonly by farcy, and terminating in acute glanders or death. The patient complains, for some time, of weakness, prostration, acute pains in the limbs and joints, sometimes excessively painful pleurodynia, and cough, sore throat, and a troublesome stuffing of the nose. When the glanders is consecutive to the farcy, as is generally the case, after a period of two, four, six, or even ten months, during which the latter affection has undergone but slight changes, symptoms of disorder in the nasal fossæ and air-passages appear. In either case, the sore throat and cough generally precede the disturbance in the nasal fossæ. Pain is felt in the trachea, with a feeling of imminent suffocation, and alteration, and almost extinction of the voice. These last symptoms sometimes disappear after a time; there is then cough with dyspnœa, and a somewhat copious expectoration, which often is suppressed. Occasionally, the disorder of the respiratory apparatus is carried to the extent of true bronchitis or pneumonia, giving rise to considerable febrile reaction. The sensation of fulness in the nose increases, and breathing through it causes a perceptible snuffle. There is little or no pain of the nose, although sometimes patients complain in this way, and refer their distress especially to the root of the nose, and between the eyes, and to the sinuses. At times, blood is blown from the nose in clots; sometimes crusts are detached, or a simple grayish puriform mucus is discharged, which, in some rare cases, constitutes a regular flow. There may now be detected, on careful examination, ulcerations causing inequalities of surface, felt by a probe, or even perforations of the septum. In the mouth, similar inspection will reveal the existence, either in the palatine arch or in the pharynx, of ulcers, which we are allowed to infer extend to the larynx and trachea. Engorgement of the submaxillary glands is rarely met with. The skin is not affected with any eruption; but it sometimes becomes œdematous at the hands and feet. To this list of special symptoms are sometimes joined the general ones, which are also met with in farcy, viz.: pains of the muscles and joints, diarrhœa, nausea, fever, with paroxysms at irregular intervals, sweats alternating with dryness of the skin; the skin of an earthy and a sallow hue, emaciation, exhaustion, wakefulness, and all the symptoms of great cachexia.

"But, in contrast with this picture, cases are seen in which there is no external character, except farcy, from the very beginning of the disease; no pain, no discharge from the nose, and only a slight cough to indicate disturbance in the respiratory functions; but yet autopsy will reveal lesions of the most serious and distinctive nature, either in the pituitary membrane or trachea, leaving no doubt of the real character of the disease.

"The period of duration of chronic glanders is long, almost as much so as that of chronic farcy. Coming on after several months' duration of this latter, it may, in its turn, last as long. Commonly, however, chronic farcy-glanders runs its course in less time than that which occurs without farcy. In this latter state it may last for a period of six years. During this time the patient enjoys intervals of ease, but rarely is the health re-established even in appearance. The constitution, once compromised, rarely rallies entirely. As respects the

mode of termination of chronic glanders, one case only of cure forbids our seeing any other than that of death for the great majority of those unfortunate persons who are victims of the disease.

"*Chronic farcy*, in man, is a morbid condition, produced by the transmission of glanders or farcy from the solipedes. It is distinguished chiefly by numerous abscesses running into fistulous ulcers, specific angioloecitis, and an entire change in the constitution; and it terminates commonly in acute glanders. Chronic farcy may exist alone or in conjunction with chronic glanders; but is of much more frequent occurrence than the latter. Of the 43 cases of contagion in man, in which the disease appeared in a chronic form, and which have been made public, 33 belong to farcy and its varieties.

"In looking over an account of the symptoms of chronic farcy, we do not find that its invasion indicates the manner in which the contagion has been applied. More generally, however, local lesions follow immediate contagion, or the inoculation of the glanders or farcinous matter, and then the disease is ushered in by symptoms of acute angioloecitis or phlegmon; but even in this respect there is no uniformity—the local lesions being sometimes wanting, although there had been inoculation. At one time the disease makes its attack with violence—at another, its approach is quite insidious. After the common precursors of disease, such as languor, want of appetite, &c., symptoms resembling those of chronic rheumatism appear, and general weakness, without adequate cause, is complained of. In six weeks or so afterwards, numerous abscesses form rapidly, and, as it were, at one growth. Tumours make their appearance in a part already predisposed on account of a contusion or other local cause, and more frequently in the limbs than elsewhere. In a case of acute glanders, detailed by Mr. Denham, at Guy's Hospital, Mr. Morgan being the surgeon at the time, the patient, a carman, was attacked with glanders consequent to an injury of the left knee, by its being jammed between two barrels. This part continued to be the seat of such organic changes, as the formation of an abscess, during the whole course of the disease, which terminated about eighteen days after the injury to the knee.

"Engorgements of the lymphatic glands in the groin and axilla are only observed as consecutive to local angioloecitis, or to an abscess in an adjoining region. As new tumours form, they continue, after being opened, to distil a serous or ichorous matter, and are converted into indolent and ill-conditioned ulcers which cannot be healed. The more superficial bones in which these ulcers appear are denuded and become necrosed; the articulations are deformed, and lose all power of motion; the skin is dry, and of an earthy hue; the hair is matted on the temples; the eyes are sunken; the face of a yellow or a livid colour; the pulse small and irregular; repeated chills prelude a fever which returns every evening. The nights, during which the body is bathed in sweat, are passed without sleep, and sometimes in much dreaming, which preceeds delirium. The appetite may last for some time, but an intractable diarrhœa supervenes, and completes the breaking down of the system. Sometimes a dry hacking cough harasses the patient, whose intellect finally becomes weakened; and his body covered with ulcers, and all the springs of life nearly dried up, he falls into a state of frightful marasmus.

"The duration of chronic farcy varies from four months to three years; the mean period being from ten to fifteen months. Sometimes there is a deceitful remission and a seeming convalescence; but a renewal of the symptoms is the signal for the persistence in disease, which commonly has a fatal termination. Of 22 cases, collected by M. Tardieu, he knows but of 6 which have been cured; and he asks whether, to a certainty, the restoration to health was permanent in all of the latter.

"The seat of the abscesses in chronic farcy is for the most part in the extremities, and generally in the lower rather than the upper ones; and in the vicinity of the joints. The matter of the abscesses varies in appearance; sometimes it is sanguinolent or sanious, and sometimes purulent, or of a grayish colour, and viscous,—occasionally without odour, and again extremely fetid. Microscopical examination does not reveal any distinctive appearances. But, after all, the most important consideration is the fact, that the matter of farcy abscesses has the property, when applied, by inoculation, to a healthy subject, of generating the disease, whether it be in a man or horse.

"In the *treatment* of chronic glanders and farcy, we cannot place



much reliance. More is to be expected from preventive measures against the disease being contracted; and, perhaps, a due appreciation of the early symptoms, or of the stage of incubation, even, may point out a course of remedies which, after the disease is fully formed, by the whole system being poisoned, will be of little avail. When there has been obvious inoculation, by the application of the glandered matter of a diseased horse, measures ought to be promptly adopted, similar to those after the bite of a rabid animal, viz.: ablation of the poisoned part, either by the knife, or by cauterization, and the use, afterwards, of stimulating washes, such as of chlorine water, strong solution of iodine, &c. In the early stage of the disease, abscesses, as they appear, ought to be opened, and either cauterized with heated iron or dressed with stimulating washes and ointments, and the healing process, which, in these cases, is very slow and difficult, aided by compresses and moderate pressure.

"The actual cautery is, and long has been, a favourite remedy in veterinary surgery, and its tried advantages, in the cure of glandered horses ought, even if direct clinical experience were wanting, to encourage its use in the glandered human subject.

"As an application to the diseased mucous membrane of the nose, creasote, recommended strongly by Dr. Elliotson, still enjoys the greatest reputation. He cured two cases of chronic glanders by injecting a watery solution of creasote up the nostrils. Mr. Ions, also, veterinary surgeon, in Waterford (Ireland), relates the cure of his own son, who had been, while yet suffering from a bad cold, and with a small sore on one of the *alæ nasi*, poisoned with the glandered matter, snorted in his face by a horse labouring under acute glanders. In two days afterwards there was a profuse discharge from the nostril, of a ropy, glairy appearance. Solution of nitrate of silver to the ulcer in the nose, and internal remedies were used without effect; and at length creasote was employed by the medical attendants, at the urgent solicitation of Mr. Ions, sen., himself. The ointment was the preparation first used, but the slightest application produced the most dreadful pain, and in its stead Mr. Ions, who now took charge of the case himself, employed a solution of two minims of creasote in an ounce of water.

"The disease had now assumed the most fearful character; there was profuse nasal discharge, accompanied by the most offensive smell, and ulcerations extending into, and seemingly occupying, the whole of the nasal cavities. There was great prostration of strength, cold perspiration, pulse 112, laborious breathing, and every appearance of approaching death."

"The solution, as above, was injected 'as high up and as universally' as possible, and its use repeated three times a day. 'I pledge my honour,' says Mr. Ions, 'that after the third injection a change almost magical took place. The discharge, in a great measure, ceased, and, two days afterwards, the ulcers began to assume a healthy appearance, and have rapidly improved ever since.' The communication was made Feb. 28th, 1839. The poisoning took place on the 20th Jan. The ulcers had all lost their chancreous character, and were assuming a healthy granulating appearance. (*Lancet*, vol. ii., 1838-, pp. 111-15.)

"Of the internal remedies, most stress has been laid on iodine and sulphur. M. Delaharpe recommends the ioduret of starch, with a slight excess of iodine; and M. Andral used, in a case of farcy, reported as cured, the ioduretted iodide of potassium. M. Tardieu would prefer the tincture of the iodine, in doses increasing gradually from two to twenty drops. Thomson reports the successful use of this preparation in a case of chronic disease in the horse. Sulphur has long and generally been used in veterinary medicine in this disease; externally by vapour to the nostrils and by ointment to the ulcers, and internally mixed with the food. In man, an advantageous method of employing it is in mineral waters, which should be drank freely, and applied externally as a wash to the ulcerous sores. As suggestive knowledge, it may be well to say that M. Youatt, although laying little stress on any curative plan for the disease in horses, tells us that blue vitriol and Spanish flies have held out the longest, among those which, at different times, enjoyed reputation in the disease in question. The deutiodide of copper has, also, he adds, been of great service in farcy, but it is not to be depended on in glanders. The tonic treatment, in all its details, should be carried out, and more

especially in the use of good substantial and nourishing food. Abstinence, or any rigidity in diet must, in the present state of our knowledge of this subject, be regarded as very prejudicial in any case of chronic glanders or farcy. Fresh and pure air are always to be included among the hygienic agents of a tonic nature, which can never be dispensed with; and if the change of climate, from a variable to a mild and equable temperature, can be procured for the patient, the probability of restoration will be increased. Pure air is relied on among the foremost remedial measures by scientific and experienced veterinary surgeons, in their treatment of glandered horses.

"Where treatment is so uncertain in its results and so often of no avail, it becomes more imperative on us to adopt all possible measures of prophylaxis. Fortunately, the poison of glanders is not generated spontaneously in the human subject as it is in the solipedes, in which alone it originates, and from which originally the poison always proceeds with which man and some other animals, as the cat and the dog, have become affected. The poison once developed in man is transmissible to other men, as well as to horses, by inoculation. The average susceptibility, as Dr. Graves has remarked, (*Clinical Lectures, ut supra*), to the poison of glanders must be small, 'for grooms and veterinary surgeons take few or no precautions for examining the diseased animals, and yet the proportion infected, compared with the number exposed, is by no means considerable.' This writer tells us, however, that from the notices which he has been able to collect, it appears that glanders in man is of very frequent occurrence in Ireland; so frequent, indeed, that he thinks the legislature called on to imitate the wise example of the Prussian government, in placing glandered horses under the surveillance of the police. M. Tardieu (p. 178) inserts the regulations of the French police on this point, which have been approved of by the Board of Health (*conseil de salubrité*). By these, all persons are forbidden to sleep, or to allow grooms to sleep, in a stable in which there is a horse, even suspected to be glanderous. The like prohibition extends to sleeping in the stables used as infirmaries for sick horses, or in any place used for lodging sick animals of any kind. Those who are allowed to take charge of glandered horses, or of horses supposed to have the disease, or who have horse infirmaries, and who are desirous of watching their animals during the night, are enjoined so to contrive it that the room of the stable-keeper or groom shall not communicate with the stable, but that the supervision shall be made through a glass window."

In the symptoms of eruption in glanders and farcy, there is no uniformity. It is chiefly pustular, and of carbuncles resembling anthracion. I shall conclude by introducing a few cases of this terrible disease.

Cases related by Dr. Graves (*op. cit.*, pp. 314-19):

I. Communicated by Dr. McDonnell to Dr. Graves.—"Patrick Wallace, a healthy muscular man, aged twenty, was admitted into the Richmond Surgical Hospital on the 6th October, 1836. It was stated that he had been in care of a glandered horse—driving, cleaning, &c.—and that he had been in the habit of drinking out of the vessel from which the horse drank. It appeared, also, that he had had an abrasion on one of his ears. On admission he had much of the appearance of a person labouring under cynanche tonsillar; he could only open his mouth to the extent of half an inch; this was the only uneasiness complained of. The left tonsil was very much enlarged, red, hard, and projecting towards the middle line; no fluctuation could be felt; there was a general fulness about the angle of the jaw, extending upwards nearly as far as the zygoma. The submaxillary gland on the same side was also enlarged and indurated. These symptoms had been ushered in by feverishness, a few days previous to admission. He was ordered to have eight leeches to the throat, to be followed by a poultice, and a bolus composed of calomel and jalap.

"Next day the external swelling was found to be increased; greater difficulty of opening the mouth; the tonsil still hard and swollen. Twelve leeches were applied to the fauces, and the patient took the tartar emetic mixture of the hospital, with sulphate of magnesia.

"On the 15th of October the disease is reported to be on the increase. Tonsil still hard, but no fluctuation; left side of the face greatly swollen; eye of the same side nearly closed, from tumefaction of the lids; general inflammatory appearance over the cheeks, and great hardness of the tissues about the angle of the jaw of the



same side, extending towards the chin; several circumscribed spots of redness, varying in extent from the size of a sixpence to that of a halfpenny, with irregular margins, scattered over different parts of the body; two pustules observable on the left leg.

"16th.—A vesicle, containing a yellowish serum, observable on the left tonsil; the same inability of opening the mouth continues; increase of swelling over the left side of the face; a small abscess has formed on the posterior part of the left forearm; some delirium during the night; three evacuations from the bowels. The tonsil to be brushed over with a solution of nitrate of silver; a blister to the fauces; the tartar emetic mixture to be continued.

"17th.—Some sleep during the night, interrupted by delirium of a low muttering character. Patient appears willing to answer questions, but cannot, from obstruction in the mouth. This, however, lasts but for a moment, and he then lapses into a state of incoherency. Mouth open to the extent of half an inch; left eye closed; considerable swelling of the left side of the face, which is indurated, hot, tense, and shining; all the glands on both sides of the jaw, but particularly on the left, are swollen and hard; same state of tonsil; nares dilated; breathing stertorous, somewhat hurried, about 28 in the minute, and interrupted by frequent sighs. Pulse very small, rapid, intermitted, and cannot be counted; skin hot, tongue furred, teeth covered with sordes. He complains of great thirst, but says he feels no pain; it is evident, however, that he feels great uneasiness in the joints and limbs when moved. There is, however, no swelling or redness of the joints; there is no discharge from the nostrils, nor is there any perceptible ulceration of the mucous membrane of the nose. No apparent affection of the absorbent glands in any other part of the body.

"During this period, vesicles and pustules of various sizes, and at various stages of growth, had made their appearance on different parts of the body, particularly on the back. They varied in size, from the head of a pin to the section of an almond. In the first stage they resembled very minute vesicles, scarcely surrounded by any inflammatory border, and containing a limpid serum. In the second stage the serum was replaced by pus; there was a considerable blush of redness around each pustule, which, at this period, became greatly increased in size. When one of the vesicles was punctured the serum appeared to come from a single cavity under the cuticle: this operation did not produce any subsidence of the tumour, a considerable hardness still remaining in the cutis or beneath it, with a cavity in the centre in which the serum was contained. A number of *achores* existed in various parts, congregated together, and not much larger than the head of a pin. These clusters were surrounded by *white raised margins*, having much the appearance of wheals, and about a line and a half or two lines in breadth; between these margins and the *achores* there existed a line of redness. The whole taken together are rather of an oval shape. There also existed numerous inflammatory spots on the right shoulder, left arm, and other parts of the body. These were of a dark brown, approaching to a livid colour; when pressure is made on them the colour disappears, but returns immediately when it is removed. On running the finger over them, a small hard tumour was felt in the centre; the margins of these spots were irregular.

"On the 17th the character of the disease became more plainly developed; at three o'clock, P. M., pus, in considerable quantity, was observed to issue from both nostrils. The patient was ordered to take the solution of chlorate of soda internally, in drachm doses, three times a day; and also a mixture composed of carbonate of ammonia, liquor ætheris oleosus, and camphor mixture. At five o'clock, P. M., he was found half out of bed, his head resting on the pillow; still able to express his wants; pulse not to be counted; legs and feet cold; breathing stertorous; numerous stigmata scattered over the surface of the body. The purulent discharge from the nostrils had ceased, but there is a discharge of mucus from the mouth, with considerable fetor of breath.

"8 o'clock, P. M.—A copious perspiration has broken out over the body; face red, tense, shining, and very much swelled; swelling has now extended to the right side of the face; right eye nearly closed; can open the left better; a few pustules have made their appearance at the inner canthus of the eye. Pulse, tongue, and skin, as in last report; delirium and muttering continue.

"Died at 4 o'clock, A. M., October 18th.

"On examining the body ten hours after death, the redness was found to have disappeared from the face; the glands about the left angle of the lower jaw as before mentioned; they were found matted to the surrounding parts. The cellular tissue covering the submaxillary and parotid glands was infiltrated with serum, and indurated; numerous depositions of pus were found in the tissue of the submaxillary and parotid glands. The brain was firm, but its ventricles contained a considerable quantity of fluid; the arachnoid membrane was opaque in many places; several patches of vascularity were observed on the pia mater. The lungs presented a congested appearance; numerous pustules were scattered over their surface—some separate, yellow in the centre, and surrounded by an ecchymosed border; others existing in clusters. They resembled, in every respect, those found on the surface of the body. The lining membrane of the larynx was very much inflamed, especially about its upper part and about the epiglottis. The inflamed parts, in this situation, were of a livid hue. There was some appearance of vesicles in the trachea, but this could not be satisfactorily ascertained. The bronchial tubes were filled with mucus. The stomach contained a quantity of yellowish-green mucus; its lining membrane presented an ecchymosed and inflamed appearance. The liver was somewhat enlarged, and adhered, by its inferior margin, to a few folds of intestine. The periosteum did not exhibit any appreciable deviation from the normal state.

"One of the chief things to be noticed in the foregoing case is the variety of inflammatory affections observed in the skin as the result of the introduction of an animal poison into the system. There was, in the first place, the general diffused redness of the face, then superficial inflammatory spots on the shoulders and arms, resembling erythema nodosum; in the next place, scattered pustules, of various sizes, commencing in the form of a vesicle, which afterwards became a pustule surrounded by an inflammatory zone; and, lastly, *achores* congregated together, and surrounded by an elevated white margin, within which there existed an inflammatory ring of a red colour. Another point worthy of notice, is the state of the lungs and bronchial mucous membrane. The lining membrane of the larynx, particularly in the vicinity of the epiglottis, was inflamed, and of a livid colour, and there was an indistinct appearance of vesicles in the trachea. But what was particularly deserving of note in the lungs, was the existence of pustules on their surface, bearing the closest resemblance to those found on the surface of the body. It is not stated whether there was any appearance of vesicles or pustules in the nose, pharynx, or œsophagus, but we are told that the stomach was ecchymosed and inflamed.

"II. The following case, says Dr. Graves, was witnessed by myself and Dr. Halahan, and seems more nearly allied to the variety of glanders termed button farcy. I regret that want of time has prevented me from arranging its details in a form more worthy of your attention; and were not the disease one of comparatively rare occurrence, I should not have ventured to lay the case before you in its present imperfect state.

"The subject of this case was a gentleman residing at Rathmines, an extensive proprietor of horses, and who, having originally graduated as a surgeon, exhibited much skill in the veterinary art. About the time of his illness he had had some horses in his establishment labouring under glanders and button farcy, to which he paid particular attention. After having laboured for some days under considerable lassitude and derangement of the stomach and bowels, he was attacked, on the 8th of July, with rigors, followed by great thirst, excessive heat of skin, and pains in his limbs. The moment he felt himself attacked in this way, he said he was sure that he had got some dangerous infection from the horses, and would never recover. He took some blue pill and colocynth, which produced a few dark and very fetid evacuations. On the 9th, his pulse was 94, his urine very high coloured, his thirst and feverish symptoms rather increased, and he suffered greatly from constant nausea and vomiting. A tumour now began to appear about three inches above the inner ankle of the right foot. He applied a poultice over it, but was obliged to remove it in a short time, in consequence of the pain occasioned by its weight. The tumour was about the size of half a walnut, of a dull red colour, tense, shining, and exquisitely painful. Its external aspect was peculiar, and might be compared to something intermediate between a boil and a spot of erythema nodosum. On the 10th, another tumour of the same cha-



acter appeared near the outer ankle of the same leg; and in this way the disease went on, tumour after tumour appearing on different parts of the body, with an increase of the feverish symptoms, until the 20th of July, when he was first seen by Dr. Halahan. At this time several tumours had appeared on different parts of his body; there was one of an extremely painful character on his head, and he complained of great tenderness and pain along the right clavicle. His thirst was still urgent, his restlessness excessive; the slightest motion gave him exquisite pain, and sleep had completely abandoned him. He had endeavoured to regulate his bowels by purgative medicines, and had applied leeches to the tumours and to the clavicle at various times, but without any decided benefit. There were eight or nine tumours on different parts of the body, of the character before mentioned, without any tendency to suppuration, and so exquisitely painful that he could only bear a single sheet over him. The inflammation about the clavicle, which was of a diffuse character, had extended up the neck and over the right shoulder; there was not much swelling, except about the clavicle; the colour of the affected parts was a peculiar dusty red. Immediately over the clavicle two vesicles were observable, filled with a transparent fluid. Three dozen leeches were ordered to be applied over the clavicle and shoulder, and the patient was directed to use chicken-broth, beef-tea, and other light nutritious articles.

"On the 21st all symptoms are stated to be on the increase. His fever, thirst, and sleeplessness are undiminished; his tongue furred and dry; his teeth covered with sordes; his pulse small, weak, and rapid; his nausea and vomiting not so troublesome. He had received no benefit from the application of the leeches; the swelling and stiffness of his neck were increased, and he had now some difficulty of swallowing. The erysipelatous surface of the neck, clavicle, and shoulder, were lightly brushed over with lunar caustic, which gave the patient an agreeable sensation, and from which he stated that he derived much relief. This was repeated the next day at his own request, and with equal benefit; the difficulty of deglutition diminished, and for two days he went on pretty well. On the 25th there was an evident increase of fever; the tumours over the body and limbs were increasing in size and number; and his anxiety, restlessness, and sufferings unabated. He had taken alternative doses of calomel and James's powder, and his bowels had been regulated by mild aperients and enemata. I saw him for the first time on the 28th. His pulse was then 98, small, and easily compressed; his thirst excessive; his restlessness and agony such as would strongly excite the pity of persons most conversant with scenes of human suffering. He had several tumours over different parts of his body, all exquisitely painful, and in their aspect something between boil and erythema nodosum. Some of them were hard to the touch; others, which appeared more advanced, were softer, and had a boggy feel. There was, however, no appearance of anything like suppuration. He was ordered sulphate of quinine, chicken-broth, ale, and other light nourishment, and an opiate at night. On the 31st, a tumour appeared on the right side of his forehead, larger and more painful than any of the rest. Another of a similar character showed itself on the right clavicle, which had been previously affected. Shortly after their appearance vesicles were observable on their surfaces, such as generally precede mortification in cases of anthrax and malignant carbuncle. Next day he was evidently worse; his pulse was 108; his fever, pain, and restlessness, unabated; and a miliary eruption began to make its appearance over his chest and abdomen. The vesicles now began to increase on the surface of the tumour; his fever and restlessness were aggravated; and his mind, which had been hitherto collected, began to wander. His restlessness was so excessive that he could not remain for a moment in the same position; and being a person of much mechanical ingenuity, he had a set of pulleys constructed and fastened to his bedstead, so that he could move himself in various directions. His medicines and diet, with the addition of claret, and opiates at night, were continued as before.

"On the 6th of August he was still worse; the tumour on the head continued to enlarge, and decided sloughing had taken place. The tumour on the clavicle presented the same aggravation in appearance and character, and a fresh tumour had appeared on the back of his head. A pustular eruption now began to make its appearance over his body, chiefly over the abdomen and limbs; his symptoms became

aggravated in every respect; the delirium and watchfulness increased; and he died on the 10th of August, about thirty-three days from the commencement of the disease. He attributed his illness to attending horses, four of which had died of button fever; and what is also curious, his nephew, who had been also engaged about the diseased animals, had fever of a typhoid character, with petechiæ of a larger sort than usual, but ultimately recovered."

*Case showing the transmission of the glanderous poison from man to the horse*—related by M. Nonat. (*Med. Chir. Rev.*, 1840.)

"In February, 1839, a young man, 21 years of age, was admitted into the Hôtel Dieu, under the care of M. Nonat. He was in a state of great prostration of strength, and highly feverish; his breathing was rapid and oppressed; the skin was hot, the face flushed, the eyelids swollen, and the eyes themselves glazed. The right side of the forehead was red, painful and puffy; further back there was a swelling on the scalp, which, when pressed upon, conveyed to the finger a sense of fluctuation. Other two abscesses existed; one on the right thigh, and the other on the left leg. Next day several pustules made their appearance on several parts of the body; and now, when the nostrils were compressed, a sanguineous frothy fluid exuded out. This pressure caused pain; and at the root of the nose the integuments began to exhibit a red and swollen appearance. During the night a purging came on, and the patient was excessively restless and uneasy.

"On the following morning there was a drowsiness, which was speedily followed by a state of complete coma; different portions of the scalp and face had become of a livid aspect; other abscesses had made their appearance in various parts of the body, and there were fresh pustules on the arms, legs, and chest; a thick yellowish-white discharge also oozed from both nostrils. All these symptoms continued to increase until next day, when death took place.

"*Dissection.*—The body was covered with pustules, which were depressed on the surface (*affaissées*), without any redness at their base, and of a dull white aspect: some were ulcerated.

"The alterations of the lymphatic system were in strict relation with the pustular eruption on the surface. The ganglia, which were the most diseased, were those in the armpits and groins.

"In addition to the abscesses noticed above, there were found many others in various states of maturity; some having the appearance of diffused purulent collections, but the greater number being very similar to what are well known under the name of metastatic abscesses. The veins of the dura mater and the cells of the diploe presented many traces of marked inflammation.

"The mucous membrane on the septum narium was swollen and highly injected with blood: here and there dark patches of ulceration, and several pustules, also, were observed. On the floor of the nostrils the mucous membrane was found thickened, very much softened, and covered with a gray-coloured *detritus*: the maxillary sinus was full of a yellowish viscid mucus.

"On the surface of the lungs there were numerous ecchymosed spots; and imbedded within their parenchyma were several abscesses—under the form of circumscribed pulmonary hæmorrhages, having a purulent infiltration in their centre. The largest of these were of the size of a walnut, the smallest of that of a hazelnut.

"*Remark.*—It was with the matter taken from one of the abscesses of this patient that M. Boulay inoculated two horses: it was inserted at the margin of the nasal passages.

"In one of them the acute form of the disease very quickly showed itself, and the animal died on the eighteenth day, after having exhibited all the usual symptoms of decided glanders.

"The other horse lived for twenty-eight days, and then died very suddenly; the immediate cause of death being certainly a rupture of the aorta; although many of the symptoms of acute glanders had been manifested during life, and also some of the most pathognomonic traces of this disease also were discovered on dissection.

"To add further weight to this conclusion—that the glanderous principle may be communicated from man to the horse, we may state that MM. Nonat and Bouley inserted some matter taken from one of the horses, which had been inoculated from their patient, into another horse, and that this last animal quickly sickened, and eventually died with all the symptoms of the genuine disease."—*Revue Médicale*.



Cases exhibiting varieties assumed by the disease (*Edinb. Month. Journ.*, June, 1841).

"CASE 1.—*Report of a case, by J. B. Tytler, Esq.*—Charles Higgs, a stout young cab-driver, was admitted into the Westminster Hospital on the 16th June, having been ill for five weeks, with severe rheumatism, pains of the legs and arms, increased at night, but without redness or swelling of the joints; the tongue furred in the centre; pulse very frequent; bowels rather confined. About three weeks ago he was bled and blistered, and felt some relief. He had three several abscesses in the lower extremities. He was treated by warm bathing, diaphoretics, and regulation of the bowels, and appeared to be making some progress toward recovery, until 23d June, when he complained of severe pain in the left leg, and swelling of the knee, with muscular pains of the chest unaccompanied by any marked constitutional symptoms. Relief was obtained from mustard cataplasms to the knee, and he continued under the former treatment, without marked alteration, till the 29th. He complains of violent pain in the head, and has had a rigor, followed by heat and fever. Ordered eight leeches to the nape of the neck, and saline purgatives, with antimony, every six hours.

"July 2d. He has again experienced some relief: the head has been shaved, and is easier; some patches of inflammation appear on the scalp. Ordered to continue the saline purgatives.

"4th. An extensive but very flat carbuncle has formed on the vertex, and having been freely incised, is dressed with resinous ointment, and poulticed. There is considerable fever.

"5th. Another carbuncle has formed on the left eyebrow. The right eyelid and cheek are much swollen and cracked in several places, discharging an extremely fetid sanies. The scalp looks erysipelatous, and is dusted with flour, and covered with cotton wool. The pulse is quick and weak; and the breathing hurried. He complains of sore throat. He takes wine and cinchona.

"6th. The throat is now extremely sore: the tongue, which had been usually pretty moist, is parched and red; breath fetid; some offensive discharge from the right nostril; pulse very rapid and small. On examining the throat, many irregular yellow ulcerated patches are seen. Wine and bark continued.

"7th. A number of pustules have appeared on the arms and legs; the throat is more ulcerated, and the right eye closed by the swelling; the sanious discharge continues. He has fallen into a low muttering delirium.

"8th. All the symptoms are aggravated; and his occupation having given rise to suspicions of glanders, which were confirmed by persons who had seen the disease in the human subject, his friends were minutely examined, and now acknowledged that not only had he been working about a glandered horse, but that a fellow-servant had died recently from the disease, by infection from the same animal. The horse also died. The patient himself died at 3 A. M. On examination ten hours after death, the fauces were found coated with sanious matter, which had collected about the angle of the jaws, and flowed into the trachea and gullet. The palate and fauces, with the posterior nares, were sloughy; a small ulcerated patch existed in the lining membrane of the trachea, just opposite the cricoid cartilage, and the larynx was generally much inflamed. The thoracic and abdominal viscera were healthy; the brain was not examined.

"This case seems to have lasted long, and, for forty-eight days, the symptoms were very ill defined.

"CASE 2.—*Report of a case of glanders in the human subject, by Alexander Graham, Esq.*—J. S., a carter, aged seventeen, consulted me on the 2d February, 1840, about a pain he had felt for some days previous in the index finger of the right hand, which was swelled, and slightly inflamed. The skin covering the first phalanx was of a livid colour, and there was fluctuation underneath. He had a considerable degree of febrile irritation. On opening the finger, a very small quantity of thin grayish-coloured fluid escaped, without affording any relief from pain. The soft parts appeared dead, but no line of separation was observable, nor indeed for many days after were there any symptoms of impending danger. He continued in nearly the same state till the evening of the fifth day from the time I first saw him, when the soft parts covering the first phalanx came off during the dressing, leaving the bone exposed. On removing the bone, which was easily done, without causing the least pain to the patient, the part presented the appearance of a very healthy-looking sore, and the red-

ness and swelling of the hand and finger entirely disappeared. On the following day, however, a new and more alarming train of phenomena presented themselves. During the preceding night, he experienced a great tendency to rigors; there was increased pyrexia, and he complained of a pain over the spine of the left tibia, near its distal extremity. At this place there was a small circumscribed tumour, which was very painful to the touch. The integuments were slightly inflamed, and an obscure fluctuation was also observed. On interrogating him and his friends closely regarding the sore on his finger, it was discovered that he had been driving a glandered horse, and that it was possible it might have been produced by his finger, which was scratched, coming into contact with the diseased animal.

"On the eighth day the tumour over the spine of the tibia had nearly disappeared, but he experienced severe and constant pain from the site of the swelling along the inside of his leg, as far as the middle of the thigh, which was tense and swelled. He showed much restlessness and anxiety; his stools were of a darkish-green colour, thin, and fetid; his tongue was loaded, and he had great thirst. The pulse was quick and small.

"On the following day (the ninth) his finger appeared to be healing; but he informed me that he had passed a very restless night, without sleep, and that the pain of his leg was more severe. The absorbents now became red and hard, and their course could be traced distinctly as far as the knee joint. The leg and thigh were more swelled, and the tumour was hardly perceptible. The pulse was 120, and small, the skin hot and dry, and the tongue very foul.

"Next day I found the leg and thigh more swelled, and found it necessary to make several incisions on the inside of the leg. They did not bleed much, but nevertheless afforded the patient some relief. His bowels were open, and the stools were fetid. From this time he became gradually worse; and on the evening of the day before that on which he died, (the twelfth,) when I visited him in company with a professional friend, we found a general tumefaction of the whole body, but mostly of the left side. His head and face were much enlarged, and, in addition to this increased swelling, there were all over his body and face several distinct and prominent pustules, resembling variola, none of which were visible the preceding day. The inside of the leg and thigh was also covered with a great number of gangrenous spots, of irregular size and shape, ranging from the bulk of a split pea to that of a shilling, but without vesication, or the least appearance of separation. These gradually increased in size and number until he died, on the 13th February.

"During the whole course of his disease, and even up to the very close of it, there was not the least manifestation of any disturbance in the sensorial functions."

Case of acute glanders following a bite from a horse, and where new symptoms were seen, by M. Landouzy (*Med. Gaz.*, 816).—"A vine-grower, fifteen days after buying a horse, in July, 1843, perceived that it was labouring under glanders. The disease was communicated to an ass living in the same stable. In order to make the horse take the drinks, the proprietor used to open his jaws with the help of a rope. One day the rope broke, and the jaws closing suddenly, he received a bite on his cheek. On the 20th of December, being two days after this, symptoms of acute glanders manifested themselves. A pustular eruption, abundant discharge from the nares, dyspnoea, diminution of the respiratory murmur, abscesses, &c.; and in addition to these symptoms, there appeared one that has not yet been described—opacity of the cornea.

"The man died on the 2d of January. At the autopsy an abundant eruption was found on the thorax and the abdomen: the bronchi were covered by a miliary eruption; the lung was filled with abscesses; the liver and spleen were evidently increased in size; in the intestines there was a miliary eruption above and below the cæcum, and in the cæcum seven ulcerations, a lesion that has not yet been mentioned. The principal features of interest which the case presents are, its inoculation by a bite, the opacity of the cornea, and the ulcerations of the cæcum.

"M. Barthelemy remarked, that the horse had been five months ill, and that, consequently, as the case was one of acute glanders, communicated by a bite from an animal chronically diseased, the distinction which some persons had attempted to establish between acute and chronic glanders was not warranted."—*Veterinarian*, Sept. 1844.



# FORMULARY.

## BATHS.

Baths ought to be prepared with soft or river water. A bath is generally taken at about blood heat, 97 of Fahrenheit; but it may be prescribed at a lower or a higher temperature according to the indications to be fulfilled. The time of remaining in a bath extends from half an hour to an hour or several hours.

### Acid Bath.

Water		
Hydrochloric or sulphuric acid	galls. xxx.	℥ii to ℥iv.

### Alkaline Bath.

Water		
Subcarbonate of potash	galls. xxx.	℥iv.

### Bath of Bran Water.

Water		
Bran	galls. xxx.	℔s. iv.

Boil the bran in ten or twelve quarts of water for half an hour, pass the decoction through a hair sieve with squeezing, and add it to the bath.

### Emollient Bath.

Emollient herbs, (althea, marshmallow, elder flowers, parietaria, &c.)		℔s. iv.
Linseed		℔ss.

Tie the linseed and herbs loosely in a cloth; boil them in 30 ℔s. of water, express, and add the decoction to a tepid bath.

### Gelatinous Bath.

Purified gelatine		℔i.
Dissolve in 10℔s. of water, by boiling, and add the solution to a bath.		

### Iodurated Baths, (Lugol.)

Water		galls. xxx.
Add to this for baths of increasing strength.		

No.	Iodine.	Ioduret of potassium.
1.	℥ii.	℥iv.
2.	℥iiss.	℥v.
3.	℥iii.	℥vi.
4.	℥iv.	℥viii.

### Sublimate or Bichloride of Mercury Bath.

Water		galls. xxx.
Bichloride of mercury		℥ii to ℥i.
This bath should be taken in a wooden bathing tub.		

### Soap Bath.

Water		galls. xxx.
Soap		℔i.

### Sulphureous Water Bath.

Water		galls. xxx.
Sulphuret of potash		℥iv.
With the addition of a pound of gelatine the gelatino-sulphureous bath, in such frequent use, is prepared. (a.)		

## CATAPLASMS.

Cataplasms are generally applied warm; cool or cold they are sometimes more effectual in relieving pruritus and subduing heat of skin.

(a) See recipes for sulphureous washes, at p. 138. Also, imitation of Barèges water for bathing, at p. 57.

### Soothing Catapasm.

Crum of bread		℥iv.
Milk		℔i.

Bring to the boiling point over a slow fire, stirring the mixture.

[The poultice made by pouring boiling water over a sufficient quantity of crum of bread, letting it stand for a few minutes, and then draining off the superfluous moisture, is generally a much better application than the poultice of bread and milk.]

### Narcotic Emollient Catapasm.

Linseed		℥iv.
Boiling decoction of poppyheads a sufficient quantity;		
add of Extract of Hyoseyamus		℥i.

## CAUSTICS.

Caustics or escharotics are in familiar use for the destruction of the skin and subcutaneous tissues when affected with disease, or for the purpose of changing the mode, the form, or the nature of an inflammatory affection of the integuments.

### Burned Alum.

Burned or desiccated alum is used in powder to a variety of ulcers of the skin; the quantity employed varies with the extent of surface to be stimulated. It is either sprinkled upon the parts with the fingers, or dusted over them with a dossil of lint.

### Nitrate of Silver.

The nitrate of silver melted and run into moulds is one of the caustics most frequently employed of all. The point of the caustic is dipped into water and applied to the part affected, during a longer or shorter space of time, according to the effect intended to be produced. If the application have been lengthened, a thin grayish and superficial eschar is produced. When minute points of the skin only require to be touched with the caustic, the stick may be shaped into a black-lead pencil.

### Potassa Fusa.

A piece of potassa fusa or of potassa cum calce, weighing a grain, and about a line and a half in diameter, applied to the skin, will, in the course of from three to four hours, occasion a grayish eschar of about half an inch in diameter, implicating the whole substance of the skin.

### Muriate or Butter of Antimony.

This caustic from being fluid has the advantage of penetrating readily into all the windings and inequalities of the sores or diseased surfaces to which it is applied. It causes eschars that are drier and better defined than those that result from the application of the potassa fusa.

### Acids.

The concentrated mineral acids, the sulphuric, nitric and hydrochloric, are all used in the same manner. Applied pure, they occasion deep eschars; diluted with water, they may be used to stimulate certain chronic inflammations. The concentrated mineral acids are frequently employed to cauterize malignant pustule in its early stages, warts, tubercles, &c.

### Acid Nitrate of Mercury.

Nitric acid		℥i.
Proto-nitrate of mercury		℥i.

This caustic is frequently and beneficially used in the treatment of certain ulcers. A piece of lint is dipped in the solution and applied to the affected surface, either continuously for as long a time as may be deemed necessary, or is simply dabbed repeatedly upon the part. If the object be to produce a deep eschar, a quantity of scraped lint is spread upon the part, and being then imbibed with the caustic solution, is kept in its place by means of a bandage. A single application of any caustic may suffice in some cases, several may be found necessary in others.



*Arsenical Paste, and Chloruret of Zinc.*  
(For these caustics vide sub. POWDERS.)

## CERATES.

*Cerate of the Subacetate of Lead.*

Simple cerate . . . . . 3i.

[White wax one part, oil of sweet almonds four parts;  
melt with a gentle heat, and as they are cooling stir  
in three parts of rose water.]

Solution of subacetate of lead (Extract. Saturni) . . . 3i.

Mix in a marble mortar. The quantity of the mineral solution may be variously increased, an ounce being in some cases not too much.

*Cerate of the Acetate of Morphia.*

Cerate . . . . . 3i.

Acetate of morphia . . . . . gr. iv.

Dissolve the acetate in a little alcohol, and mix it well with the cerate.

*Sulphur Cerate.*

Cerate (without the addition of water) . . . . . 3ii.

Sublimed sulphur . . . . . 3iv.

## DOUCHES.

Douches, to their action of simple lotions, add percussion to a greater or less degree of the parts against which they are directed. The jet is either made to ascend or to descend. It is administered during ten, fifteen or twenty minutes. After the douche, patients are often directed to take a bath for half an hour.

## FOMENTATIONS.

All the compounds employed as baths and douches may be used as fomentations.

Cool or cold fomentations are usefully employed in several of the acute and chronic inflammations of the skin.

*Of the Subacetate of Lead.*

Water . . . . . lbj.

Solut. of subacetate of lead, from . . . . . 3ii to 3i.

## FUMIGATIONS.

Fumigations or fumigating baths are prepared with substances susceptible of being converted into vapour, which, by means of a suitable apparatus, is applied to the whole or to a portion only of the body.

*Of Calomel.*

Proto-chloride of mercury (calomel) . . . . . 3ii.

*Of Cinabar.*

Red sulphuret of mercury . . . . . 3ss to 3iii.

Local fumigations of this substance are readily applied by means of a hot tile and a funnel.

*Of Sulphur.*

Sulphur . . . . . 3iv to 3i.

## LINIMENTS.

*Mercurial.*

Olive oil . . . . . 3i.

Liquor of ammonia . . . . . 3i.

Strong mercurial ointment . . . . . 3ii.

Useful in the treatment of the syphilitic eruptions.

*Chlorine.*

Water saturated with chlorine . . . . . 3i.

Oil of sweet almonds . . . . . 5i.

Used to disperse the dark stains consecutive on syphilitic pustules, tubercles, &c.

*Hydrochloric Acid.*

Balsam of Fioravanti . . . . . 3iv.

[Alcohol distilled over a host of aromatics; cloves, cinnamon, nutmeg, styrax balsam, Venice turpentine, &c., &c. Eau de Cologne or proof spirit with a drop or two of any essential oil, may be substituted for it.]

Hydrochloric (muriatic) acid . . . . . gtts. xxxii.

Useful in recent and unexcoriated chilblains. The parts affected are rubbed night and morning with a little of the mixture.

## LOTIONS.

As lotions, plain water, and decoctions or infusions of various emollient, narcotic and astringent vegetables are employed. Cool or cold they are very useful in a great variety of acute and chronic inflammations of the integuments.

*Spirituos Mercurial.*

Rose water . . . . . lbj.

Eau de Cologne . . . . . 3i.

Bichloride of mercury (corrosive sublimate) . . . . . grs. viii.

Very useful in old cases of rosacea. The quantity of bichloride may be increased till it amounts to 3ss.

*Mercurial.*

Almond emulsion . . . . . lbj.

Bichloride of mercury . . . . . grs. xii.

Eau de Cologne . . . . . 3i.

This is similar to but not so active as the Gowland's lotion.

*Phagedenic Mercurial.*

Bichloride of mercury . . . . . grs. xxx.

Lime water . . . . . lbj.

The corrosive sublimate is decomposed, a chlorate of lime or chloride of calcium, and an oxide of mercury being formed; it should always be well shaken before being used.

*Mercurial.*

Rose water . . . . . 3iiss.

Mercurial water of the *codex*, [a compound of the liquor

of subacetate of lead, alum, corrosive sublimate, sal

ammoniac, and water] . . . . . 3ss.

Used to destroy pediculi pubis.

*Sulphate of Copper.*

Sulphate of copper . . . . . 3ss to 3i.

Distilled water . . . . . lbj.

*Hydrocyanic.*

Distilled water of the lettuce . . . . . 1bssii.

Medicinal prussic acid . . . . . 3ii to 3iv.

Used in impetigo and ulcerated cancer.

## PILLS.

*Asiatic, (Arsenical.)*

Arsenious acid . . . . . English. French.

Powdered black pepper . . . . . 55 grs. troy 66 grs.

Gum Arabic . . . . . 9 drachms 9 drs. (gros.)

Water . . . . . q. s. 2 drs.

Water . . . . . q. s. q. s.

The arsenious acid and black pepper powder are triturated for a long time together in an iron mortar. The gum Arabic is then added, and in a marble mortar, water is added in sufficient quantity to make a mass which is divided into 800 pills.

These pills contain nearly 1-14th of a grain English, of arsenious acid in each.

*Arsenical.*

Arsenious acid . . . . . 1 gr.

Gum Arabic and mucilage, q. s. to make 12 pills.

The dose is one a day for adults.

*Plummer's Pills, (Mercurial.)*

Protochloride of mercury, (calomel) } . . . . . aa 3i.

Golden sulphuret of antimony } . . . . . q. s.

Mucilage . . . . . q. s.

Make pills of 3 grs. each.

The recipes for these pills vary.

*Of Dulcamara and Sulphuret of Antimony.*

Extract of dulcamara . . . . . 1bss.

Sulphuret of antimony . . . . . 3ii.

Powder of dulcamara . . . . . q. s.

To form a mass to be divided into pills weighing 4 grs. each.

These pills are the same as those denominated *Kunkel's*, in all but the addition of the powder of dulcamara. They vary in their effects with the sulphuret of antimony with which they are prepared, and the quantity of arsenic it contains.

*Of Dulcamara and Arsenic.*

Extract of dulcamara . . . . . 3i.

Arsenious acid . . . . . gr. i.

Mix and make eighteen pills.

Dose, one daily.

*Of Protochloride of Mercury, (Calomel.)*

Protochloride of mercury, (calomel) . . . . . 3i.

Gum guaiacum . . . . . 3ii.

Syrup of buckthorn . . . . . q. s.

Make into seventy pills.

Two for a dose, night and morning, drinking a glass of infusion of hops after each dose, and taking a purgative draught occasionally.

*Of Protoioduret of Mercury.*

Protoioduret of mercury . . . . . gr. ii.

Gum guaiacum . . . . . gr. xii.

Starch and mucilage . . . . . q. s.

To make six pills.

Dose, one a day.



*Of Sedillot, (Mercurial.)*

Strong mercurial ointment . . . . .	℥i.
Spanish soap . . . . .	℥ii.
Althea root and mucilage . . . . .	q. s.
To make 36 pills, weighing 4 grs. each.	
Dose, two or three a day.	

*Of Mercurial Ointment and Opium.*

Mercurial ointment . . . . .	℥ii.
Extract of opium . . . . .	℥ss.
Powder of althea root . . . . .	℥iij.
Syrup . . . . .	q. s.
To make 72 pills, each containing a grain of mercury, and half a grain of watery extract of opium.	
Dose, same as Sedillot's pills, and may be substituted for these advantageously in the syphilides which are accompanied with nocturnal pains in the bones and joints.	

## UNGUENTS.

*Alkaline.*

Slaked quick lime } . . . . .	āā ℥i. (a)
Subcarbonate of soda } . . . . .	
Watery extract of opium . . . . .	gr. xv.
Lard . . . . .	℥ii.
Essence of bergamot . . . . .	gtts. x.
Prescribed in prurigo.	

*Strong Mercurial.*

Lard . . . . .	} equal parts by weight.
Mercury . . . . .	
Rub till the mercury is extinguished.	

*Of the Protochloride of Mercury, (Calomel.)*

Calomel . . . . .	℥i.
Lard . . . . .	℥i.
Used in various pustular and squamous inflammations of the skin.	

*Of the Ammoniacal Protochloride of Mercury.*

Ammon. pr. chlor. of merc. . . . .	℥i.
Lard . . . . .	℥ii.
Prescribed in Rosacea and Sycosis, when the inflammation is no longer acute.	

*Of the Proto-chloride of Mercury and Sulphur.*

Lard . . . . .	℥i.
Calomel . . . . .	℥i.
Sublimed sulphur . . . . .	℥iss.
Essence of bergamot . . . . .	gtts. x.

*Of the Cyanuret of Mercury.*

Cyanuret of mercury . . . . .	℥ss.
Lard . . . . .	℥i.
Ess. of bergam. . . . .	gtts. x.
Used in chronic lichen and eczema in quantities of half a drachm, gradually increased.	

*Of the Protoioduret of Mercury.*

Protoiod. of merc. . . . .	gr. xx.
Lard . . . . .	℥i.
Ess. of bergam. . . . .	gtts. x.
This salve expedites the cicatrization of cutaneous syphilitic sores. The quantity of the protoioduret should be increased or diminished, according to its effects, and as the parts are inflamed in a greater or less degree.	

*Of the Deutoioduret of Mercury.*

Deuto-iod. of merc. . . . .	gr. vi to xii.
Lard . . . . .	℥i.
For the discussion of tubercles and syphilitic ulcers.	

*Of the Ioduret of Sulphur.*

Ioduret of sulphur . . . . .	gr. iii.
Lard . . . . .	℥i.
Dose, a scruple by way of friction.	

*Of the Nitrate of Mercury.*

Nitrate of mercury . . . . .	℥i.
Spermaceti ointment . . . . .	℥i.
Used in prurigo, sycosis, &c. (b)	

*Of the Sub-deutosulphate of Mercury.*

Sub-deutosulph. of merc. (turpeth mineral) . . . . .	grs. xxx.
Lard . . . . .	℥i.
Ess. of bergamot . . . . .	gtts. x.
Useful in inveterate psoriasis.	

(a) Of anthrokokali, and of fuligokali, see pp. 301-2.

(b) See formulæ of various anti-pruriginous ointments in note to p. 231.

*Of the Red Oxide of Mercury.*

Fresh butter . . . . .	℥iii.
White wax melted . . . . .	℥iii.
Red ox. of merc. (red precipitate) } . . . . .	āā ℥iss.
Camphor . . . . .	
Used in Rosacea.	

*Of the Bichloride of Mercury.*

Lard . . . . .	℥i.
Bichlor. of mercury (corrosive sublimate) . . . . .	℥i.
Rub them well together in a glass mortar for six hours: and during the last hour add of hydrochlorate of ammonia . . . . .	
Used in the way of friction, in doses of a drachm, to the soles of the feet.	

*Of Pitch or Tar.*

Pitch melted by means of heat } . . . . .	āā ℥i.
Lard, also melted } . . . . .	
Mix and pass through a piece of fine rag. (a)	

*Of the Subacetate of Lead.*

Liquor of the subacetate of lead . . . . .	℥ii.
Olive oil . . . . .	℥ii.
Yellow wax . . . . .	℥ss.
Camphor . . . . .	gr. x.

*Of the Subcarbonate of Potash and Sulphur, (Helmerich's ointment.)*

Lard . . . . .	℥i.
Sublimed sulphur . . . . .	℥ii.
Sub-carbonate of potash . . . . .	℥i.
Use. In scabies, in the dose of an ounce in friction daily. (b)	

*Of Spermaceti.*

Olive oil . . . . .	℥iv.
White wax . . . . .	℥i.
Spermaceti . . . . .	℥ii.
Used in chaps of the lips, &c.	

*Of White Hellebore.*

Powder of white hellebore . . . . .	℥i.
Hydrochlorate of ammonia . . . . .	℥i.
Lard . . . . .	℥i.
Used as a stimulant in various chronic diseases of the skin, such as inveterate psoriasis, lepra, &c. (c)	

*Of Cacao Butter.*

Cacao butter . . . . .	℥ss.
Oil of sweet almonds . . . . .	℥ii.
Mucilage of quince seeds . . . . .	℥ii.
Used in chapping of the nipples, &c.	

*Of Oxide of Zinc.*

Oxide of zinc . . . . .	℥i.
Lard . . . . .	℥vi. (d)

*Depilatory.*

Lard . . . . .	℥ii.
Sub-carb. of Soda of commerce . . . . .	℥iii.
Slaked quick lime . . . . .	℥ii.
Used in favus.	

## POWDERS.

*Of the Sulphuret of Antimony.*

Sulphuret of antimony } . . . . .	āā grs. xii.
Sugar } . . . . .	
To be divided into twelve doses. The effects of the medicine vary according as the sulphuret of antimony contains a larger or smaller proportion of arsenic.	

*Of Calomel and Arsenious Acid.*

Calomel prepared by sublimation . . . . .	199 parts.
Arsenious acid . . . . .	1 part.
Use. In ulcerated lupus and cancer.	

(a) In note to p. 237, see formula for naphthaline ointment.

(b) See also note to p. 138.

(c) The following is advantageously used to stimulate sebaceous secretion:

Elderflower ointment . . . . .	℥i.
White of egg . . . . .	℥i.
Croton oil . . . . .	℥x.

To be used night and morning.

*(d) Sulphuret of Copper and Zinc.*

Elder flower ointment . . . . .	℥i.
Sulphate of copper or zinc . . . . .	℥i.
To be used twice or thrice in the day.	

Useful in sebaceous flux.



*Of Sulphuret of Lime. (Of Pyhorel.)*

Sulphuret of lime . . . . . ℥ii.

Use. Rubbed on the palms of the hands with a little oil, in scabies.  
The sulphurets of potash and soda may be used in the same manner.*Depilatory.*Lime . . . . . ℥i.  
Sub-carb. of potash of commerce . . . . . ℥ii.  
Charcoal powder . . . . . ℥i.

Used in favus.

*Depilatory of Plenck, of the Sulphuret of Arsenic.*Quicklime . . . . . ℥iss.  
Starch . . . . . ℥x.  
Sulphuret of Arsenic . . . . . ℥i.

It is made into a soft paste with water, and applied to the parts to be denuded.

*Of the Hydrochlorate of Gold.*Hydro-chlor. of gold and soda . . . . . gr. i.  
Powder of lycopodium . . . . . gr. ii.

To be divided into fifteen parts, and one used daily, being rubbed on the tongue and gums in syphilis. The dose to be gradually increased. The preparation exposed to the air is rapidly decomposed. It is also given in the shape of pills, each containing 1-15th of a grain.

*Of Sulphuret of Mercury and White Oxide of Arsenic (of Rousselot).*Sulphuret of Mercury . . . . . ℥i.  
White oxide of Arsenic . . . . . ℥ss.  
Dragon's blood . . . . . ℥ss.*Arsenical of Dubois.*White oxide of arsenic . . . . . ℥ss.  
Dutch vermilion . . . . . ℥i.  
Dragon's blood . . . . . ℥iv.

A little of this powder is made into a thick paste with water or mucilage, and applied to the surface of open cancers, freed from incrustations.

*Arsenical of Frère Come.*Arsenious acid . . . . . gr. x.  
Cinnabar . . . . . ℥ii.  
Charcoal of an old shoe . . . . . a pinch.

Applied in the same way as the last. It must be used very cautiously, and only to limited portions of the ulcerated surface at the time.

*Of Chloride of Zinc.*Chloride of Zinc . . . . . 1 part.  
Flour . . . . . 3 parts.

Use. Same as the arsenical powders. It must be very slightly moistened, and left to attract moisture from the atmosphere for some time before it is applied.

## SYRUPS.

*Compound of Sarsaparilla (of Larrey).*Sarsaparilla . . . . . lbj.  
Dried elder berries . . . . . lbss.  
Guaiacum . . . . . ℥iv.  
China-china } . . . . . āā ℥ii.  
Sassafras }  
Senna leaves } . . . . . āā ℥ss.  
Boragae }  
Sugar . . . . . lbvi.  
Water . . . . . q. s.

Mix and add to each pound of syrup.

Watery extract of opium }  
Bichloride of mercury } . . . . . āā grs. v.  
Hydrochlorate of ammonia }

Used in syphilis. Dose, one or two tablespoonfuls daily.

The following is the formula used in the Hospitals of Paris:

Bichloride of mercury } . . . . . āā grs. xx.  
Hydrochl. of ammon }  
Extract of opium }  
Hoffman's anodyne liquor . . . . . ℥ii.  
Syrup of sarsaparilla . . . . . lbiv.*Of Mercurial Ether.*Simple syrup . . . . . lbj.  
Mercurial ether (sulphur. ether, ℥i. Corros. sublim. grs. xvi.) . . . . . ℥i.

Used in syphilis. Dose, from one to four drops daily.

*Antisyphilitic of Laffecteur.*Sarsaparilla . . . . . lbj.  
Guaiacum . . . . .  
China-china } . . . . . āā lb. vi.  
Sassafras }  
Yellow cinchona bark . . . . . lbiii.  
Boragae flowers . . . . . lbj.  
Anise seeds . . . . . ℥iv.  
Purified molasses . . . . . lbs. xxx.

A simple compound decoction is first to be made with a sufficient quantity of water, after maceration for forty-eight hours. Add the molasses at last, and bring the decoction to the consistence of syrup. (a)

*Of Fumitory.*Expressed juice of fumitory, depurated by heat . . . . . lbii.  
White sugar . . . . . lbii.  
Make a syrup.*Of wild Pansy.*Expressed juice of the leaves, depurated . . . . . lbii.  
White sugar . . . . . lbii.  
Make a syrup.

## SOLUTIONS.

*Of Arsenite of Potash (Fowler's Solution).*Protoxide of arsenic, in powder } . . . . . āā 32 grs.  
Subcarbonate of potash }  
Distilled water . . . . . ℥iv.

Digest in a sand bath in a flask, till the oxide is dissolved. When cold, add two drachms of the compound spirit of lavender, and a sufficiency of water to bring the whole to a pound. A very active medicine, to be used with great discretion; five or six drops gradually increased to twenty.

*Of Arseniate of Soda (Pearson's solution).*Arsen. of soda . . . . . gr. iv.  
Distilled water . . . . . ℥iv.  
Dose, twenty drops to half a drachm, daily.  
Used in chronic eczema, lichen agrius, &c.*Of Arseniate of Ammonia.*Arseniate of ammonia . . . . . gr. vi.  
Distilled water . . . . . lbss.

Used in chronic eczema with discharge, but little inflammation. Dose, same as last formula.

*Of the Bichloride of Mercury (of Van Swieten).*Bichl. of mercury . . . . . gr. viii.  
Alcohol . . . . . ℥i.  
Distilled water . . . . . lbj.

Dose, a tablespoonful daily in a glass of water, or of milk, or of decoction of sarsaparilla.

*Of Subcarbonate of Potash.*Subcarb. of potash . . . . . grs. xxiv.  
Decoction of dogs-tooth grass . . . . . lbii.

The dose of subcarb. of potash may be carried the length of half a drachm.

## TINCTURES.

*Of Camphorated Cantharides.*Tinct. of cantharides . . . . . ℥iv.  
Camphor . . . . . ℥i.

Dose, 4, 6, 8, 10, 15, 20, and 30 drops gradually increased. This acts less powerfully on the urinary organs than the common tincture.

## TISANS.

*Of Daphne Mezereum and Sarsaparilla.*Sarsaparilla root . . . . . ℥ii.  
Bark of the mezereon root . . . . . ℥i to ℥ii.  
Boil in three quarts of water till a third is wasted; add near the end,  
Coriander seeds } . . . . . āā ℥i.  
Liquorice root. }*Of Ormus Pyramidalis.*Bark of ormus pyram. . . . . ℥i.  
Water . . . . . lbiss.

Reduce to lbii. by boiling.

*Of Muriatic Acid.*Water . . . . . lbii.  
Simple syrup . . . . . ℥ii.

Muriatic acid q. s. to make the liquor pleasantly acid.

*Of Sulphuric Acid.*Water . . . . . lbii.  
Sulphuric acid . . . . . ℥ss.  
White sugar . . . . . ℥ii.  
Essential oil of lemon peel . . . . . gtts. ii.

The mixture is more energetic without the sugar.

(a) M. Gibert has lately directed the attention of the Academy of Medicine to a formula which he terms syrup of ioduretted deutioduret of mercury (*sirup de deuto-iodure-ioduré*). The formula for this syrup is the following:—Deutoioduret of mercury . . . . . 1 part  
Ioduret of potassium . . . . . 50 parts.  
Water . . . . . 50 "  
Dissolve, filter, and add of simple syrup . . . . . 2400 "

The average dose is from four to six drachms.



*Of Sarsaparilla.*

Sarsaparilla root . . . . . ℥ii.  
 Macerate for twelve hours in  
 water . . . . . ℥iiss.  
 Which are reduced to ℥ss. by boiling.

*Of Sarsaparilla and Sulphuret of Antimony (Tisan de Feltz).*

Root of sarsaparilla . . . . . ℥i.  
 Sulphuret of antimony (tied up in a bag) . . . . . ℥i.  
 Isinglass . . . . . ℥iv.  
 Boil the sarsaparilla and sulphuret of antimony in a pint and a half of water;  
 add the isinglass already dissolved in a little water; reduce to a pint by boiling,  
 which the patient will take during the course of the day.

*Of Sarsaparilla and Arsenious Acid.*

Tisan of sarsaparilla . . . . . ℥ii.  
 Arsenious acid . . . . . gr. 1-16th.  
 Used in the same way as the last.

*Compound of Sarsaparilla (Tis. de Vinache).*

Sulphuret of antimony . . . . . ℥ii.  
 Sarsaparilla . . . . . }  
 China-china . . . . . } āā ℥iiss.  
 Guaiacum . . . . . }  
 Sassafras . . . . . } āā ℥ss.  
 Senna leaves . . . . . }

Tie up the sulphuret of antimony in a bag; boil with the three first articles in  
 three quarts of water. When reduced to a third, add the senna and sassafras,  
 which are only to be infused. When cold, decant and allow to settle.

*Of Walnut husks, Sarsaparilla, &c., (of Pollini).*

Green walnut husks . . . . . }  
 Sarsaparilla . . . . . } āā ℥ss.  
 China-china . . . . . }  
 Pumice stone pulverized . . . . . }  
 Sulphuret of antimony . . . . . }  
 Boil in two quarts of water till reduced to one half.  
 Dose, a spoonful every hour.

*Of Sarsaparilla, Alum, Senna, &c. (Decoction of Zittman.)*

[A purgative compound decoction of sarsaparilla, which has been vaunted in  
 syphilitic complaints].

• *Zittman's Decoction modified.*

No. 1.  
 Sarsaparilla . . . . . ℥xii.  
 Liquorice root . . . . . ℥ss.  
 Senna leaves . . . . . ℥iii.  
 Anise seeds . . . . . ℥ss.  
 Sulphate of alumina . . . . . ℥ss.  
 Calomel . . . . . ℥ss.

Boiled in a sufficient quantity of water to fill sixteen bottles after the decoction  
 is complete.

No. 2. Residue of the above.  
 Sarsaparilla . . . . . ℥vi.  
 Liquorice root . . . . . ℥vi.  
 Cinnamon . . . . . ℥iii.  
 Lemon-peel . . . . . ℥iii.  
 Cardamom seeds . . . . . ℥iii.

After decoction, fill sixteen bottles. (a)

(a) For an enumeration of remedies in chronic cutaneous diseases, see "Pre-  
 liminary Considerations" by the author from p. 32 to 65, and "outlines &c.," by  
 the editor, p. 56 to 58.







# EXANTHEMATA.

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THE exanthemata are characterized, when at their height, by red spots or surfaces, which disappear for a short time under the pressure of the finger. There are seven of them, viz :—measles, scarlet rash, scarlet fever, erysipelas, erythema, urticaria and the syphilitic exantheme.

## FIRST GROUP.

This comprises the febrile exanthemata—*rubeola*, *roseola*, *scarlatina* and *erysipelas*.

*RUBEOLA* (or *measles*) is characterized by blotches, sometimes slightly elevated, developed on the skin, leaving the interspaces of a natural colour, or presenting a faint blush. The form of these blotches is occasionally irregularly lunated. The eyes are generally red and filled with tears.

IN *ROSEOLA* (or *scarlet rash*) there is less fever; the spots are large and round or oval, and there is no injection of the conjunctivæ.

*SCARLATINA* presents a scarlet-red or strawberry-coloured eruption, diffused and consisting of small dots close together. The tongue, towards the last, sheds its epithelium, and is of a vivid red. Sore throat most frequently attends, but the eyes are not injected.

*ERYSIPELAS* shows itself on various parts of the body by a violet or yellowish-red, in patches slightly swelled. It is often confined to one side. There is neither sore throat nor redness of the eyes.

## PLATE I.

*Fig. 1.*—*Roseola*, or scarlet rash, developed on the face and body of an infant.

*Fig. 2.*—*Rubeola*, or measles, in its ordinary form.

*Fig. 3.*—Measles, attended with extravasation of blood in the cutis, called *rubeola hemorrhagica*. This appearance is observed under two circumstances :—1st, in severe cases of common measles attended with congestion; 2d, in malignant cases, attended with hemorrhage from the mucous membranes.

*Fig. 4.*—Appearance presented by the decline of hemorrhagic *rubeola*, in which the petechiæ are left, (tenth day.)

*Fig. 5.*—Eruption of *scarlatina*, with small white points on the neck.

*Fig. 6.*—Sanguineous effusion into the skin in scarlet fever, constituting *scarlatina hemorrhagica*.

*Fig. 7.*—The appearance presented by the tongue in scarlet fever.



# EXANTHEMATA.

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## PLATE II.

*Fig. 1.—Erysipelas* of the face, with œdema of the eyelids in an old subject. The diffuse redness of erysipelas is easily distinguished from the spotted appearance of other eruptions.

*Fig. 2.—Bullæ* and *vesicles* developed on an erysipelatous surface. They are seldom numerous.

## SECOND GROUP.

The second group comprises the exanthemata which are seldom preceded or accompanied by a febrile movement. It is composed of ERYTHEMA and URTICARIA.

*Fig. 3.—Rheumatic erythema.* This variety is sometimes preceded by fever, and has been described as *rheumatic roseola* and *eruptive rheumatic fever*.

*Fig. 4.—Erythema nodosum.* A very painful variety involving the cellular tissue.

*Fig. 5.—Erythema papulosa.* This variety resembles *lichen urticatus*, but is distinguished by the colour and the absence of itching.

*Fig. 6.—Erythema annulata.* This may be confounded with *lepra* with the scales rubbed off; but, besides other distinguishing traits, this disappears in a week or two.



ROSIOLA — RUBEOLA — SCARLATINA

1. Roseola.

2. Rubella (Measles).



6. Tongue of Scarlatina.

4. Rubella.



3 & 4  
Rubella (Scarlatina).



7. Scarlatina  
haemorrhagica.

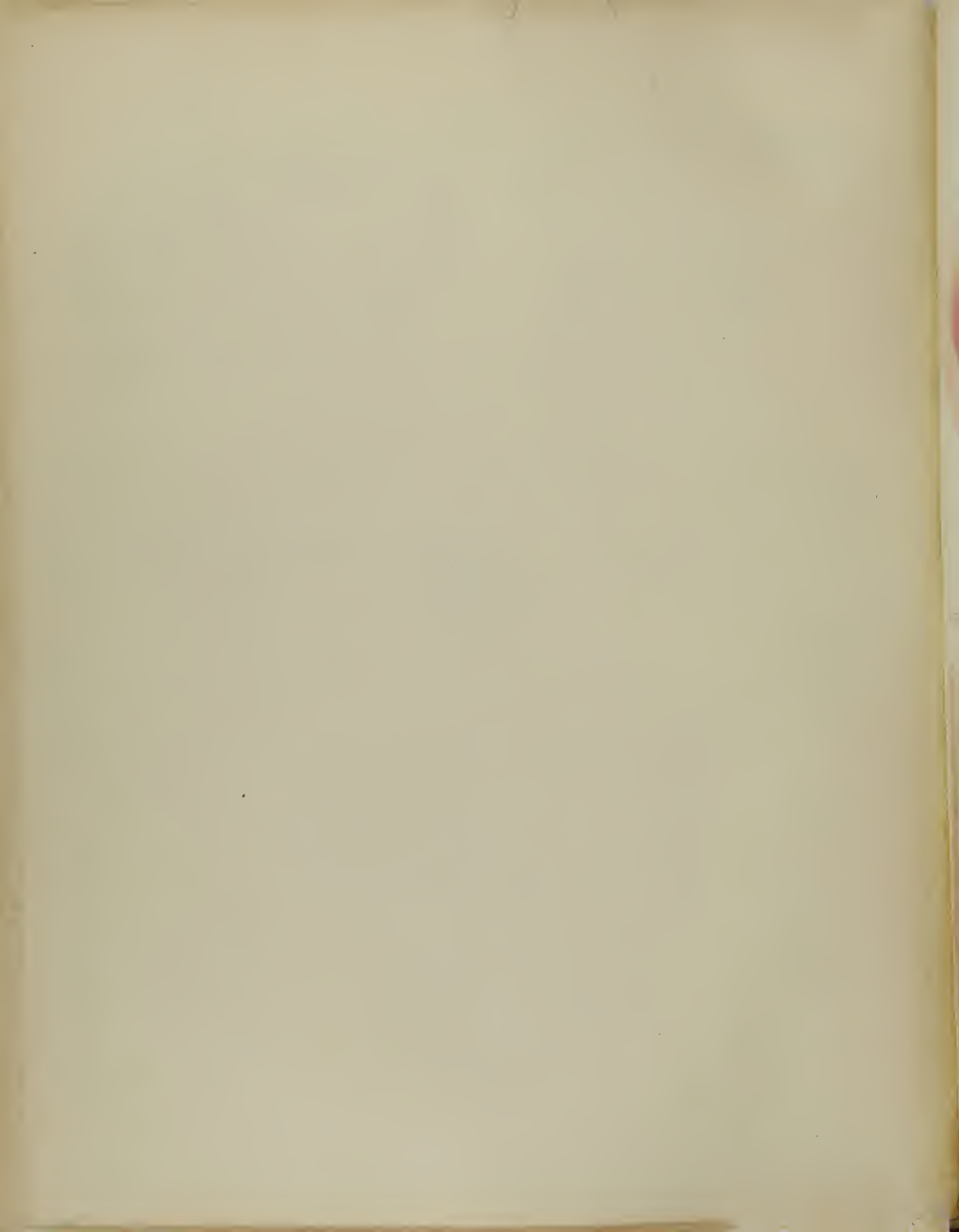


5. Scarlatina.

3. Rubella.









ERYSIPELAS — ERYTHEMA.

1. Erysipelas.

3. Rheumatic Erythema.

2. Vesicles of  
Erysipelas.

4. Erythema nodosum.

5. Erythema papulosa.

6. Erythema annulata.







# EXANTHEMATA.

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## PLATE III.

*Fig. 1.—Erythema iris.* A rare variety resembling *herpes iris*, but wanting the vesicles.

*Fig. 2.—Chronic erythema.* Distinguished by red spots, superficial, irregular at the margins and destitute of heat or itching.

*Fig. 3.—Urticaria* (nettle rash). On the face.

*Fig. 4.—Urticaria alba* (porcelaine). White prominent wheals, like the cuts of a whip.

## BULLÆ.

Bullæ are large elevations of the cuticle distended by a serous, or sero-purulent fluid.

The *First Group* of Bullæ comprises PEMPHIGUS, RUPIA and BULLAR SYPHILIS.

*Fig. 5.—Pemphigus.* The bullæ discreet and scattered irregularly. This is the most frequent variety. Observe the bullæ but slightly inflamed and the lamellated crusts which take their places when they are broken.

*Fig. 6.—Pemphigus* in groups, forming a sort of transition or intermediate link between it and *herpes*.

*Fig. 7.—A large bulla.* Occasionally seen distended with a milky fluid; the skin is much inflamed.



## BULLÆ.

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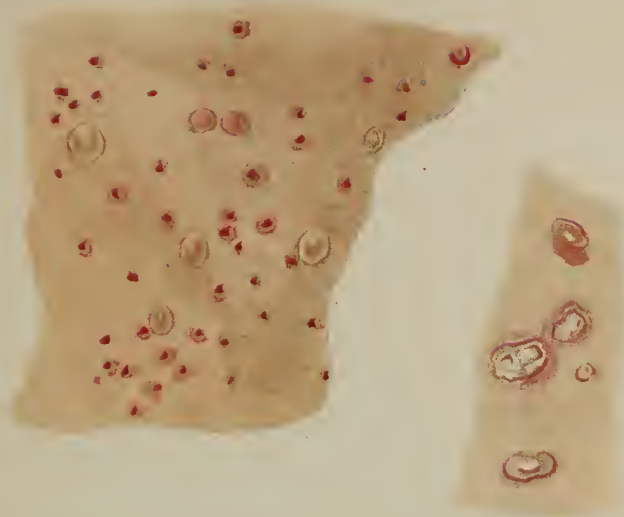
### PLATE IV.

- Fig. 1.—Pemphigus pruriginosus.* A rare variety, distinguished by small bullæ, mixed with the papulæ of prurigo.
- Fig. 2.—Pemphigus infantilis.* Often attended with white ulcerations, and forming a link between *pemphigus* and *rupia*.
- Fig. 3.—Scabs of pemphigus,* left after the breaking of the bullæ.
- Fig. 4.—Rupia simplex.* Ulcerations and scabs surrounded by a kind of ring formed of the detached epidermis.
- Fig. 5.—Rupia prominens.* Elevated conical scabs, surrounded with pus.
- Fig. 6.—Rupia cachectica.* Bullæ sanguinolent, scabs black, and shaped like a shell.
- Fig. 7.—Rupia gangrenosa.* A deep slough with a livid tint of the surrounding skin.



PEMPHIGUS. — RUPIA

1. Pemphigus pruriginosus.



4. Rupia simplex



2. Pemphigus infantilis.

Baths & excoriations.

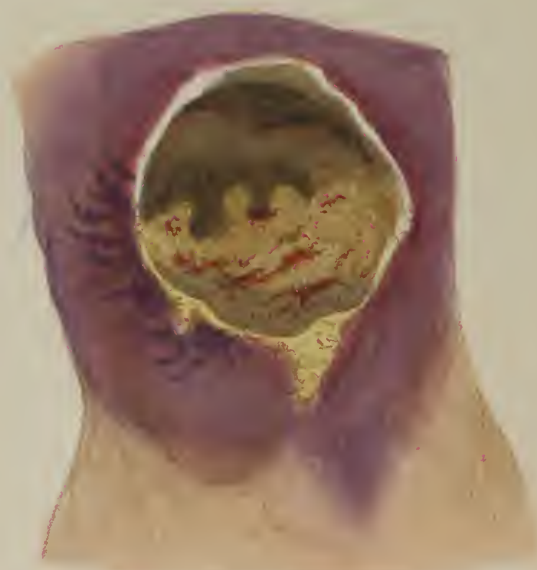
3. Crusta of Pemphigus.



5. Rupia prominens.



6. Rupia Cachectica.



7. Rupia Gangrenosa.











1. Herpes Zoster on face



2. Herpes Zoster (*Shingles*)



5. H. Zoster in the mouth.



4. — H. Zoster. — 3.



7. Herpes Iris.



6. H. Zoster or Zona.





## VESICULÆ.

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VESICLES are small elevations of the cuticle, filled with serosity, at first transparent, afterwards becoming muddy or sero-purulent previous to desiccation; and they comprise, HERPES, MILIARIA, SUDAMINA, ITCH, ECZEMA, MERCURIAL ECZEMA and VESICULAR SYPHILIS.

The vesicles of *Herpes* are developed in groups on a red ground, and terminate in little scales or crusts.

The vesicles of *Sudamina* are minute, and resemble drops of water.

The vesicles of *Miliaria* are red or white, minute and mixed with papulæ, accompanied by fever and profuse sweating.

## PLATE V.

Fig. 1.—*Herpes zoster*, on the *face*; this variety almost always extends upon the scalp.

Fig. 2.—*Herpes zoster*, on the *body* (shingles), at the commencement.

Fig. 3 and 4.—Consecutive ulcerations, and 4th, cicatrices following *zona*, fig. 6.

Fig. 5.—*Herpes zoster*, extending from the face into the mouth.

Fig. 6.—*Zona. Herpes zoster* of the trunk, presenting irregular bullæ and crusts.



# VESICULÆ.

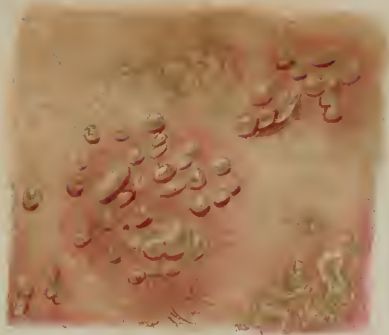
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## PLATE VI.

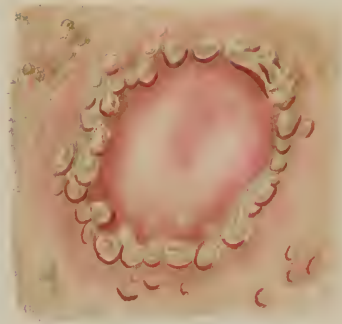
- Fig. 1.*—*Herpes phlyctenodes*. Scattered groups of vesicles without symmetry, on various parts of the body.
- Fig. 2.*—*Herpes circinatus* (ring-worm). Commencing in a point and spreading in an irregular circle; as the old vesicles disappear, new ones arise outside of them.
- Fig. 3.*—*Herpes præputialis*, on the prepuce.
- Fig. 4.*—*Herpes labialis*, on the lips, often seen after fevers.
- Fig. 5.*—*Herpes digitorum*, whitish on its palmar aspect.
- Fig. 6.*—*Sudamina*.
- Fig. 7.*—*Miliaria*.
- Fig. 8.*—*Mercurial* eruption resembling *eczema*.



1. H. Phlyctenodes.



2. H. Circinatus. (*ring worm*)



3. H. Praeputialis.



4. H. Labialis.



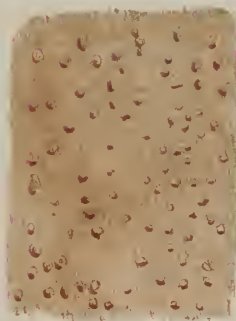
5. H. digitorum



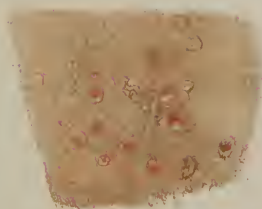
8. Mercurial



7. S. miliaria



6. Sudamina.









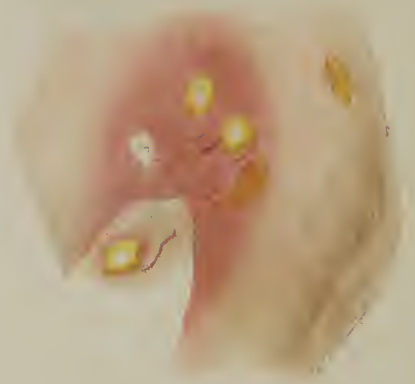




1. Scabies (itch)



2. Scabies



4. Magnified vesicles.

3. Itch

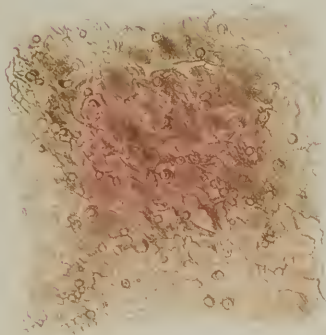


5. Itch insects. — 6.



8. Eczema simplex.

7. Eczema simplex.





# VESICULÆ.

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## PLATE VII.

*Fig. 1.*—*Scabies* or *itch* of long standing.

*Fig. 2.*—*Scabies purulenta*, with the burrows running out from them.

*Fig. 3.*—*Scabies* on the foot of an infant.

*Fig. 4.*—Conoidal form of the vesicles seen through a magnifier.

*Fig. 5.*—*Acarus scabei* or itch-insect magnified. (Ventral aspect.)

*Fig. 6.*—Do. dorsal aspect.

*Fig. 7.*—*Eczema simplex* in the vesicular stage.

*Fig. 8.*—*Eczema impetiginodes*. Large, moist, yellowish, flattened scales, covering a great portion of the body.



# ECZEMA.

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## PLATE VIII.

*Fig. 1.*—*Eczema* of the scalp, and of the ear, which after being chronic has suddenly assumed an acute character.

*Fig. 2.*—*Eczema* of the face in the acute form, presenting here and there whitish pellicles like false membranes.

*Fig. 3.*—Curious appearance of the leg of an old woman suffering from chronic eczema.

*Fig. 4.*—Affection of the nails accompanying general eczema.

*Fig. 5.*—*Chronic eczema* of the penis attended with redness and swelling of the prepuce.

*Fig. 6.*—*Inveterate chronic eczema* complicated with varices in an old man. The skin is ulcerated in many places during an exacerbation.



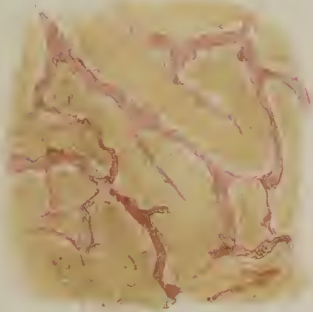
1. Eczema of scalp.



2. E. of face



3. Eczematous fissures



6. Chronic eczema with excoriations.



5. E. of the penis



4. E. of the nails









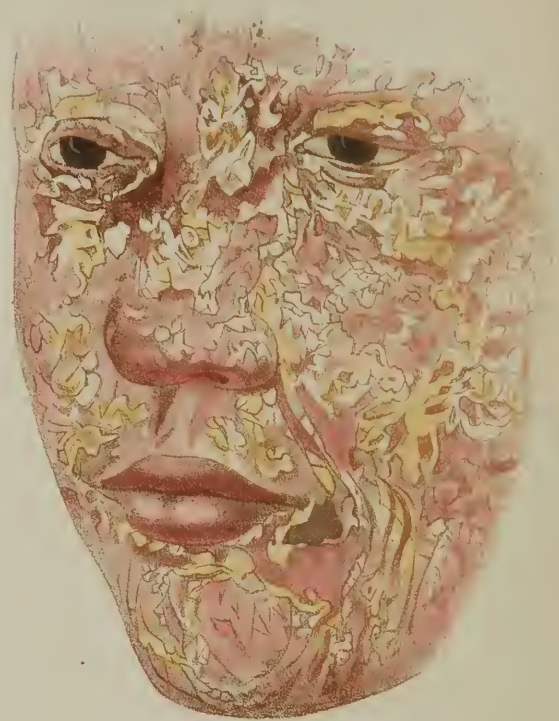




1. Eczema impetiginodes.



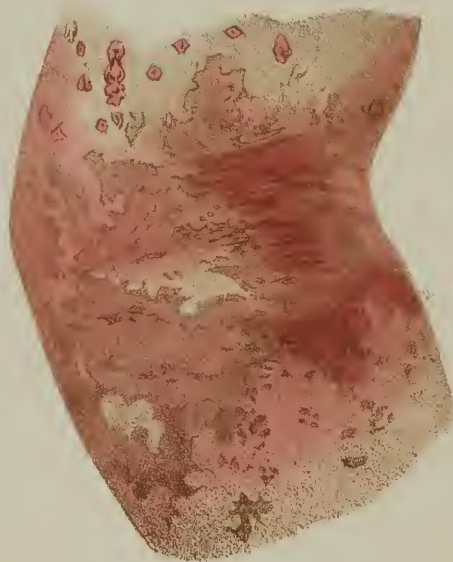
2. Eczema inveterata.



3. Eczema furfuracea.



4. Eczema rubrum.



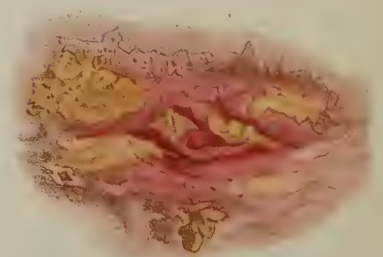
5. Eczema of the nipple.



6. Eczema of the lips.



7. Eczema of the navel.





# ECZEMA.

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## PLATE IX.

- Fig. 1.*—*Chronic eczema impetiginodes* presenting a mixture of scabs and epidermoid scales.  
*Fig. 2.*—Remarkable state of the face after a long continued *eczema impetiginodes*.  
*Fig. 3.*—Scaly condition following a chronic *eczema* of the scalp.  
*Fig. 4.*—*Eczema rubrum* of the bend of the arm. The cuticle is abraded in several points.  
*Fig. 5.*—*Chronic eczema* of the nipple in the scaly stage.  
*Fig. 6.*—A rare variety of *eczema impetiginodes* on the lips.  
*Fig. 7.*—Moist *eczema* of the navel in an acute stage.



# ECZEMA.

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## PLATE X.

Fig. 1.—*Chronic eczema* affecting the toe-nails.

Fig. 2.—*Inveterate eczema* of the anus with fissures and abraded cuticle in patches.

## PUSTULES.

Pustules are little deposits of pus in the skin, which is deeply inflamed. Pustular diseases are ten in number, viz:—VARIOLA, VARICELLA, VACCINE, VACCINELLA, FAVUS, IMPETIGO, ACNE, ROSACEA, ECTHYMA and PUSTULAR SYPHILIS.

They are divided into three groups:—

The first group comprises *variola*, *varicella*, *vaccine*, and *vaccinella*.

The second group comprises *favus* and *impetigo*.

The third group contains *acne*, *rosacea*, *sycosis*, and other follicular diseases. *Ecthyma* forms the transition between pustular diseases and furunculous inflammations.

## VARIOLA, (SMALL-POX.)

Fig. 3.—*Discrete small-pox*, commencing stage.

Fig. 4.—*Variola* in groups—red elevated patches with depressed pustules.

Fig. 5.—The same in an advanced stage.

Fig. 6.—*Confluent small-pox*, pustules purulent.

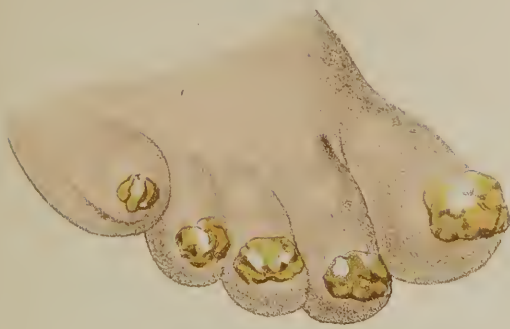
Fig. 7.—*Confluent variola* in its worst form.

Fig. 8.—*Hemorrhagic variola*.

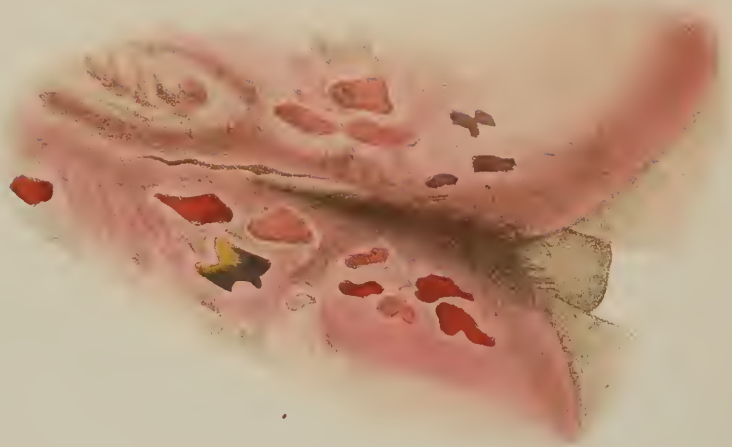
Fig. 9.—*Pseudo-membranous discs* in the trachea, the mucous membrane of a lively red in the intervals.



1. Eczema of the nails.

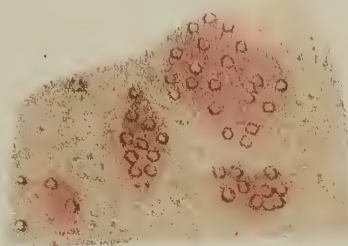


2. Eczema podicis

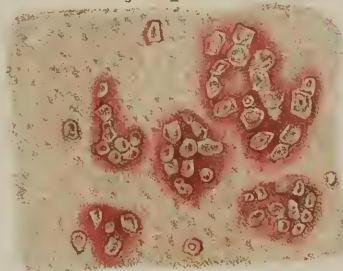


VARIOLA.  
(Small - pox.)

3. Discrete V.



V. in groups.

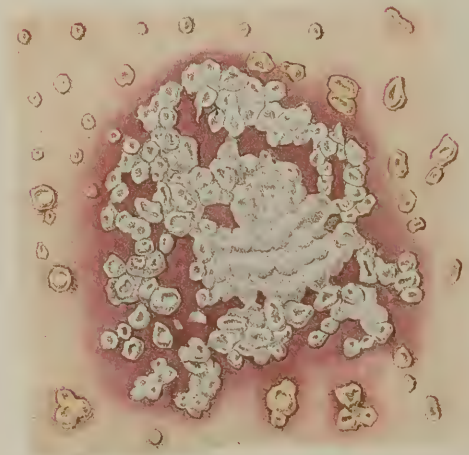


4.

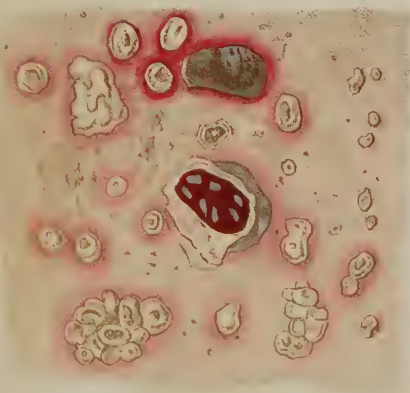


5.

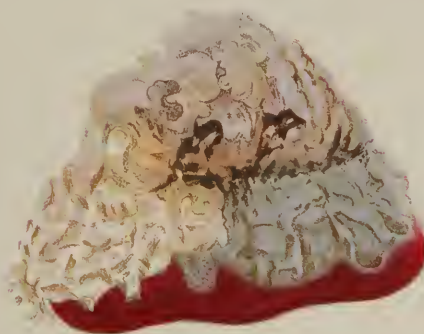
6. Confluent Variola



8. Hemorrhagic V.



7. Confluent V.  
(worst form)



9. Pustules in the trachea.













1. Pustules on the face.



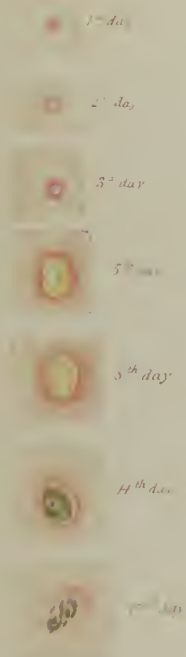
3. View of a Pustule



4. Sections of the pustules



5. Progress of Varioloid



6. Progress of Varioloid



8. Vaccine



10. Spurious vaccine



11. Spurious vaccine



12. Spurious vaccine



9. Vaccine



13. Vaccine pustules



7. Vaccine





# P U S T U L E S.

## P L A T E X I.

- Fig. 1.*—*Pseudo-membranous discs* in an annular form found under the cuticle of the sole of the foot. (*Variola*.)  
*Fig. 2.*—Similar discs concave, and more perfect.  
*Fig. 3.*—*Variola* as it appears in the fœtus.  
*Fig. 4.*—Sections of pustules in various stages. *a.* The papula. *b.* Pseudo-membranous pustule. *c.* Purulent pustule with ulceration of the cutis-vera. *d.* Papula magnified. *e.* Magnified view of *b.* *f.* Magnified view of *c.* *g.* Section of a scab of variola. *h.* Section of a varioloid scab. *i.* Magnified view of *g.* *k.* A pseudo-membranous disc, dried under the cuticle of the sole of the foot. *l.* Magnified view of *h.*  
*Fig. 5.*—Progress of variola, the days are marked on the plate.  
*Fig. 6.*—Corresponding progress of varioloid.  
*Fig. 7.*—Cow-pox on the animal's teat.  
*Fig. 8.*—Progress of vaccine.  
*Fig. 9.*—Scab and cicatrix of vaccine.  
*Fig. 10.*—Progress of vaccinella or imperfect vaccine.  
*Fig. 11.*—Various appearances of spurious vaccine.  
*Fig. 12.*—Vaccine which has failed or become spurious.  
*Fig. 13.*—Simultaneous development of variola and vaccine; the eighth day of vaccination; three vaccine pustules.



# P U S T U L E S.

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## P L A T E   X I I.

*Fig. 1.*—*Conoidal varicella* in its early stage.

*Fig. 2.*—*Globular varicella*—pseudo-membranous discs on the centre of the pustules; one of the discs being open, shows the central papilla.

*Fig. 3.*—*Vesicular varicella*, or chicken-pox.

*Fig. 4.*—*Common varicella*, vesicles in various stages.

*Fig. 5.*—Progress of *varicella*.

## F A V U S.

*Fig. 6.*—*Favus disseminata* principally in the scalp.

*Fig. 7.*—Follicles and hair-bulbs filled with favous matter, seen from the under side of the scalp.

*Fig. 8.*—*Favus aggregata* in an infant, with partial alopecia.

*Fig. 9.*—Ulcerations of the scalp following a long case of *favus*.

*Fig. 10.*—Healthy hair-bulb magnified.

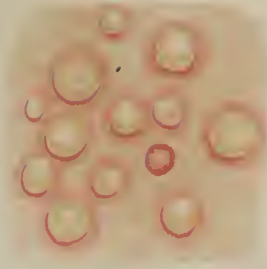
*Fig. 11.*—Similar bulb, affected with *favus*, magnified.



1. Vesicular V.  
(mitten por.)



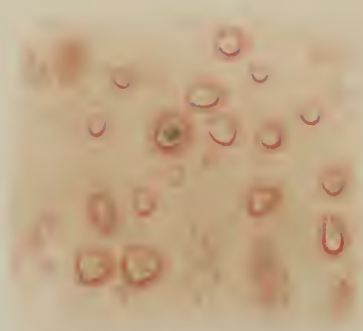
2. Vesicular V.



3. Vesicular V.



4. Vesicular V.



5. Progress of Varicella



6. Varicella vesicular V.



7. Follicles in Varicella



8. Follicles in Varicella



9. Follicles in Varicella



10.





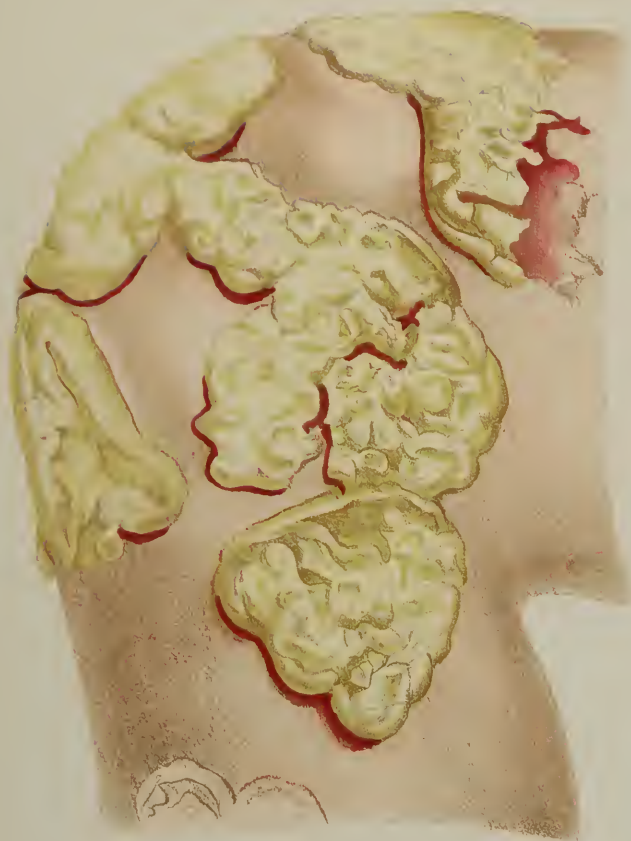








1. Favus of the knee.



2. Favus in mass.



4. Impetigo eczematosa.



3. Impetigo figurata.



5. Impetigo scabida



6. Impetigo faciei.





# P U S T U L E S.

## P L A T E X I I I.

Fig. 1.—*Favous crusts* of a sulphur yellow colour and a large size, on the knee of an individual who was affected in every region of the body.

Fig. 2.—*Favous crusts* in which the peculiar characters are lost.

## I M P E T I G O.

Fig. 3.—*Impetigo figurata*, mixed with the hair.

Fig. 4.—*Impetigo eczematosa*. A very rare form, a central crust surrounded by psyraceous pustules.

Fig. 5.—*Impetigo scabida*. Crusts, covering the leg and filled with fissures.

Fig. 6.—*Impetigo faciei*. A mass of scabs projecting irregularly with desquamation of the cuticle at its margins.



## P U S T U L E S .

### P L A T E   X I V .

*Fig. 1.—Impetigo sparsa.* Pustules and scabs.

*Fig. 2.—Impetigo* in a chronic form, affecting the scalp.

*Fig. 3.—Impetigo annulata* in a scrofulous individual.

*Fig. 4.—Impetigo figurata* in various states.

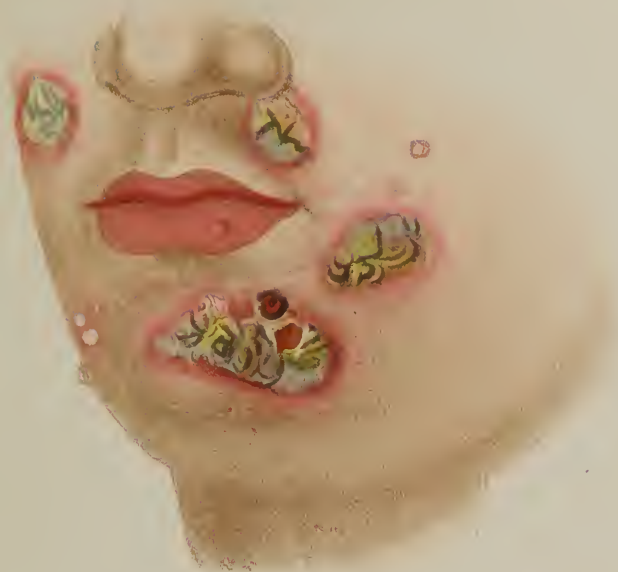
*Fig. 5.—Impetigo figurata* after the scabs were detached.

*Fig. 6.—Chronic impetigo* affecting the beard on the upper lip.

*Fig. 7.—Annular* variety of impetigo remarkable for its shape and the swelling of the skin under the pustules.



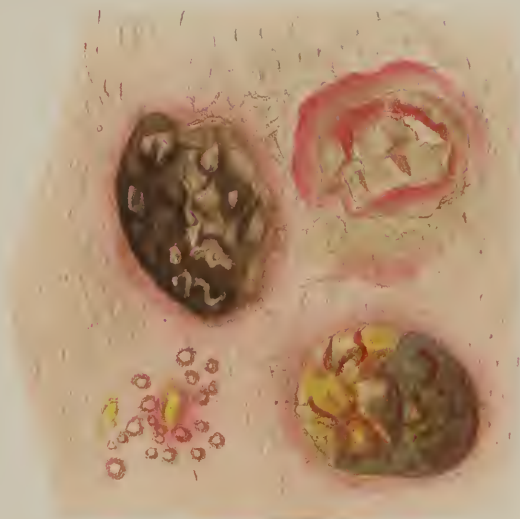
1. Impetigo sparsa.



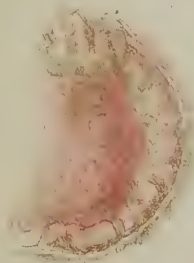
2. Impetigo capilliti.



4. Impetigo figurata



3. Impetiginous ridge.



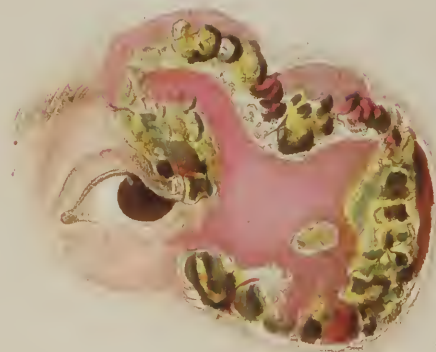
5. Impetigo.



6. Chronic impetigo.



7. Impetigo annulata.  
(Pustular Ringworm.)













1. Impetigo annulata.



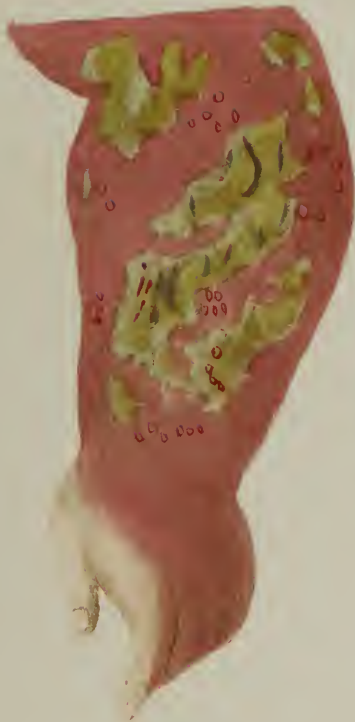
2. Impetigo narium.



3 Impetigo of infancy.  
(Crustea lactea)



4. Erysipelatous Impetigo.



6. Sebaceous Flux.



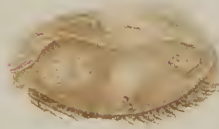
5. Syccosis inveterata.



7. Follicular tumor.



8. Follicular plates.



9. Piliferous follicular tumor.



10. Section of a  
Follicular tumor.





# PUSTULES.

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## PLATE XV.

*Fig. 1.*—A rare variety of *impetigo annulata*.

*Fig. 2.*—Complete closure of the nostrils by the scabs of *impetigo*, without ulceration of the mucous membrane.

*Fig. 3.*—The form of *impetigo* usually seen in infants; (*crustea lactea*, or milky scall.)

*Fig. 4.*—*Impetigo*, accompanied by erysipelas.

*Fig. 5.*—*Sycosis inveterata* on the upper lip.

## FOLLICULAR DISEASES.

*Fig. 6.*—Plates formed of altered and dried follicular secretion on the surface of the skin.

*Fig. 7.*—A follicle whose mouth has become obstructed; distended by its own secretion in the form of a tumour.

*Fig. 8.*—Yellow follicular plates on the upper eyelid.

*Fig. 9.*—Section of a distended follicle containing hair.

*Fig. 10.*—Section of a common follicular tumour.



# P U S T U L E S .

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## P L A T E X V I .

- Fig. 1.*—Hypertrophy of the follicles on the *corona glandis*.  
*Fig. 2.*—Minute pearly cartilaginous granules under the cuticle.  
*Fig. 3.*—Minute follicular elevations presenting a black point in the centre. (*Acne punctata*.)  
*Fig. 4.*—Hairs developed on the arm of a child after the application of a blister.  
*Fig. 5.*—Follicular granulations arising under the same circumstances.  
*Fig. 6.*—*Acne indurata* on the back, in various stages.  
*Fig. 7.*—*Acne* on the scrotum.  
*Fig. 8.*—*Acne rosacea*—consisting of pustules, tubercles, redness of skin, and dilatation of the capillary veins.  
*Fig. 9.*—*Sycosis* of the beard. (*Mentagra*.)  
*Fig. 10.*—Consecutive vegetations in *sycosis*.  
*Fig. 11.*—Fungous vegetations on the scalp. (From *Alibert*.)



1. Follicular hypertrophy .



2. Pearly Granulations .



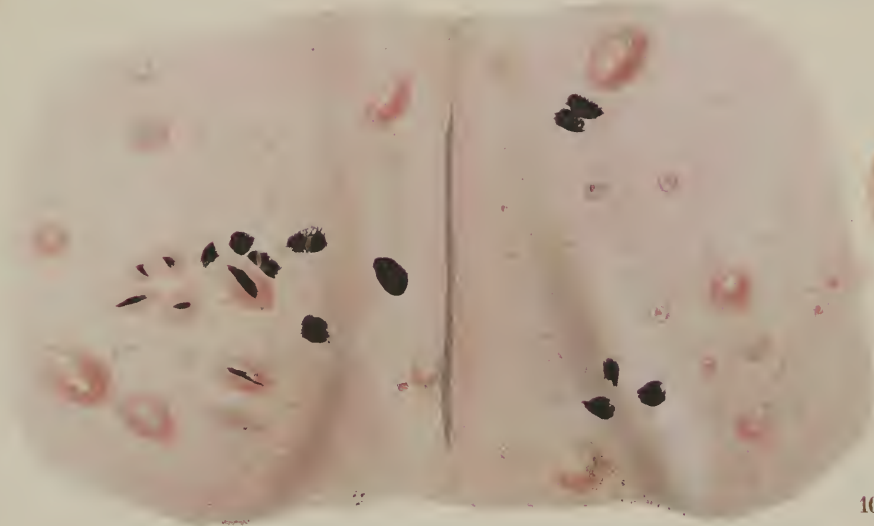
3. Follicular Elevations .  
(*Acne punctata* )



4. Pilous productions .



6. Acne on the back



5. Follicular granulations .



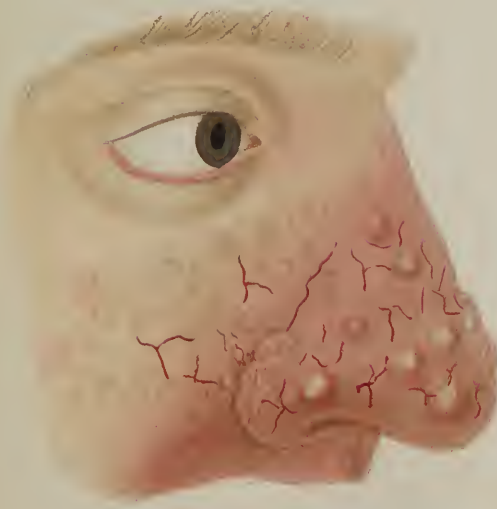
7. Acne on the Scrotum .



10. Sycosis vegetans .



8. Acne rosacea .  
(*Copper-nose*)



9. Sycosis .



11. Sycosis vegetans .













1. Glanders.

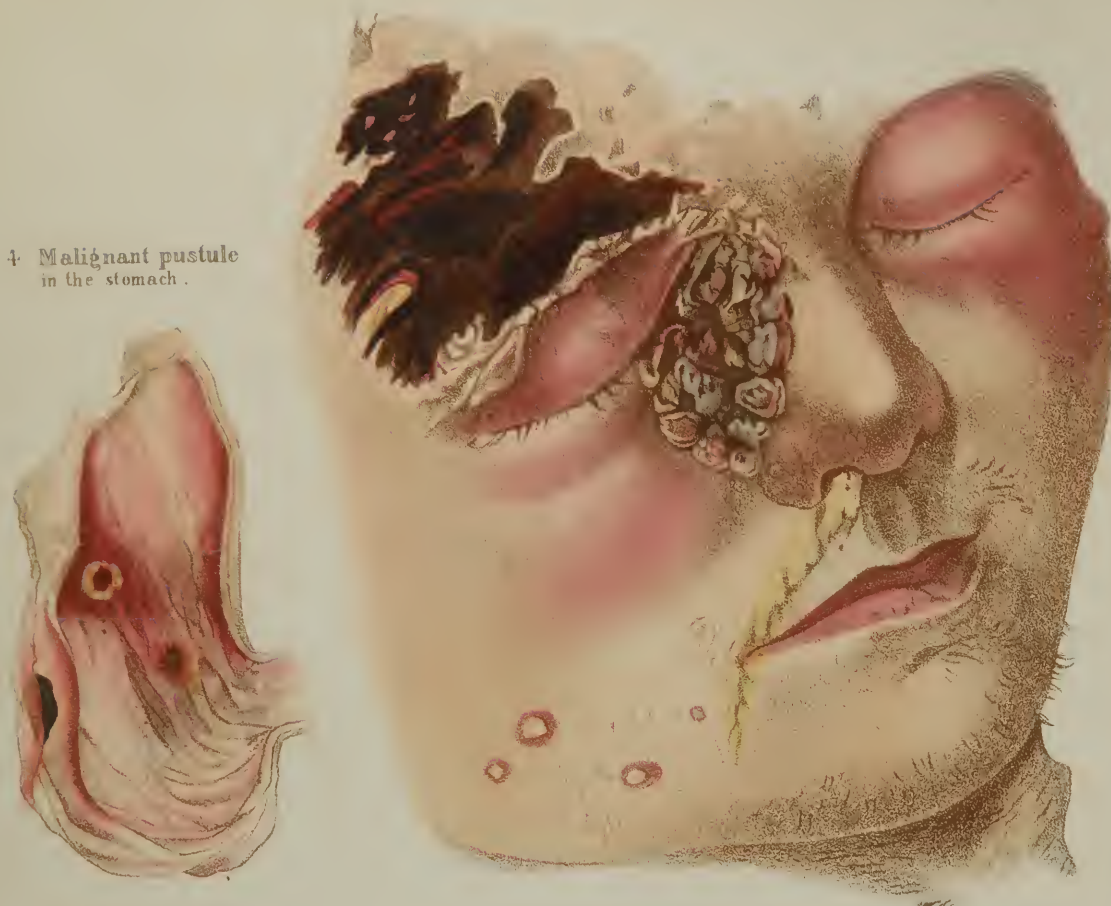
2. Glanders  
(Pituitary memb.)

4. Malignant pustule  
in the stomach.

6. Gangrenous  
Ecchymosis.

3. Malignant pustule

5. Boil & Carbuncle





# FURUNCULOUS AND GANGRENOUS INFLAMMATION.

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## P L A T E X V I I .

*Fig. 1.*—A case of glanders in the human subject. Gangrene of the skin on the forehead, a group of tubercles in the corner of the eye. Scattered do. on the cheeks, and puriform matter flowing from the nostrils.

*Fig. 2.*—The mucous membrane from the frontal sinus in a glandered subject.

*Fig. 3.*—Malignant pustule on the upper eyelid, slough in the centre, the cuticle around elevated by bloody serum and diffuse inflammation outside of that.

*Fig. 4.*—Gangrenous spots in the stomach of a subject who died of malignant pustule.

*Fig. 5.*—Boil, carbunculous boil and anthrax, or carbuncle—all in the suppurating stage.

*Fig. 6.*—Deep-seated ecchymoses which precede typhoid gangrene.



# FURUNCULOUS AND GANGRENOUS INFLAMMATION.

---

## PLATE XVIII.

- Fig. 1.*—*Typhoid gangrene* with abrasion of the cuticle.  
*Fig. 2.*—Deep mortification of the skin and subjacent cellular tissue.  
*Fig. 3.*—*Common ecthyma*.  
*Fig. 4.*—Pustules of *cachectic ecthyma* surrounded by a livid areola.

## PAPULÆ.

Papulæ are small, solid, itchy elevations of the skin, either reddish, or of the natural colour of the skin, usually terminating by a scaly desquamation.

The papular diseases are LICHEN, STROPHULUS, PRURIGO and PAPULAR SYPHILIS.

## LICHEN.

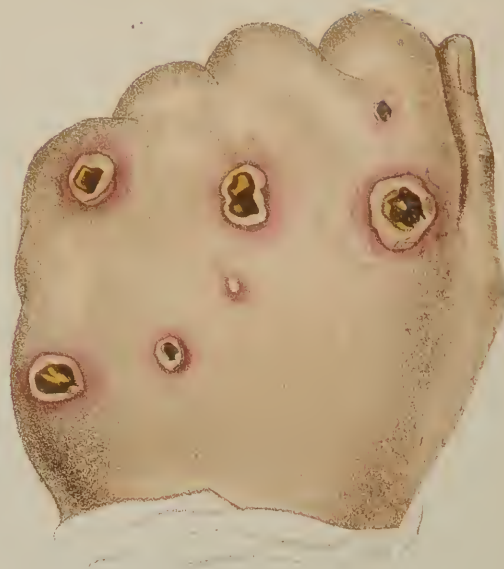
- Fig. 5.*—*Simple acute lichen* on the breast. (Prickly-heat.)  
*Fig. 6.*—*Acute lichen* arranged in circles and arcs mixed with patches of various forms over the whole body.  
*Fig. 7.*—*Lichen pilaris* affecting the hair-bulbs of the fore-arm.  
*Fig. 8.*—Margin of a large annulus of *lichen* from the thigh.  
*Fig. 9.*—*Lichen agrius* in the ham, deep alteration of the skin surrounded by the papulæ.  
*Fig. 10.*—*Lichen simplex* in a chronic form with successive crops of papulæ.



2. Typhoid Gangrene.

3. Ecthyma.

1. Typhoid Gangrene



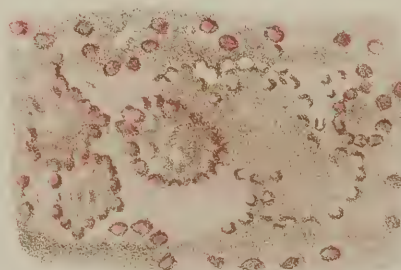
4. Cachectic Ecthyma



5. Lichen simplex  
(acute)



6. Lichen circumscriptus  
(acute)



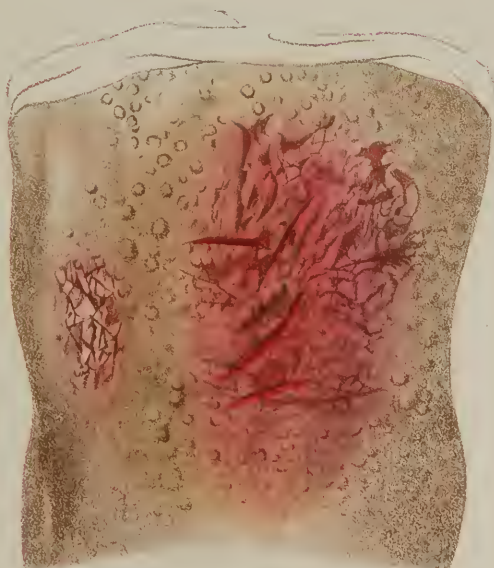
7. Lichen pilaris.



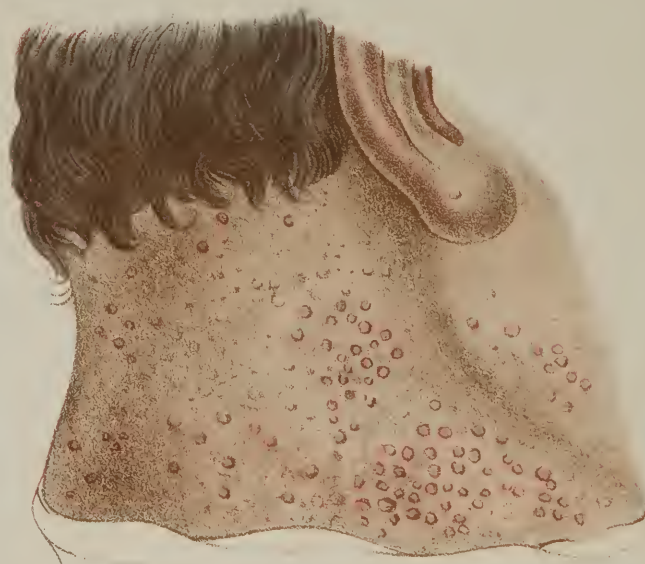
8. Lichen linearis



9. Lichen agrius



10. Lichen simplex.  
(chronic)









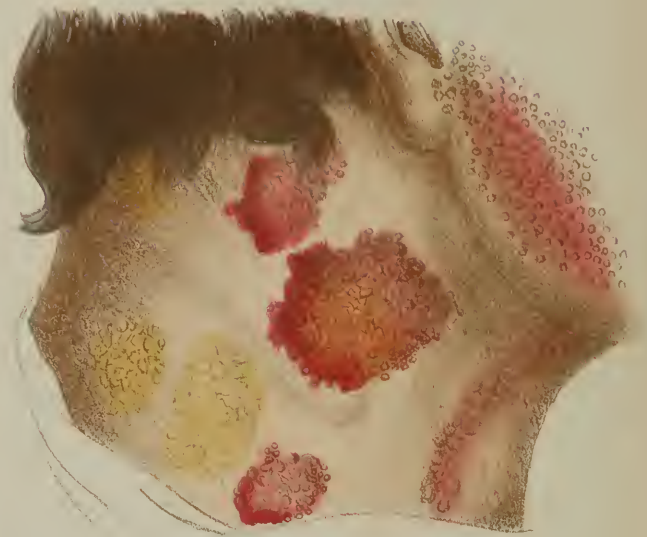




1. Lichen urticatus

2. Lichen circumscriptus.

3. Lichen lividus.



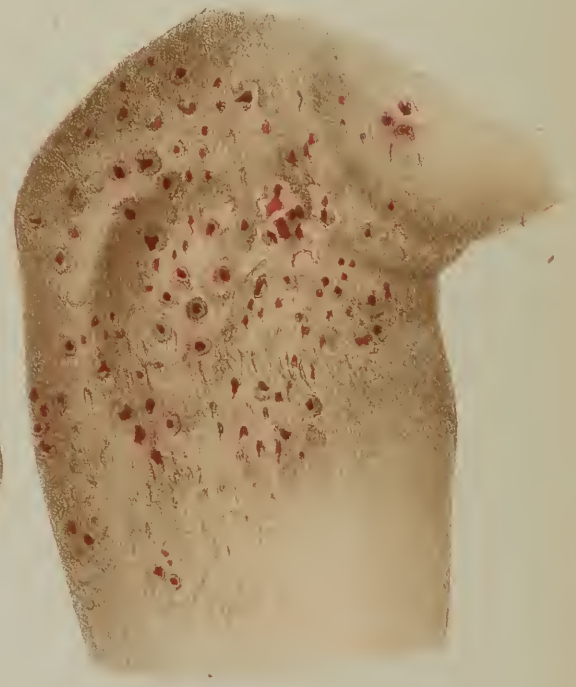
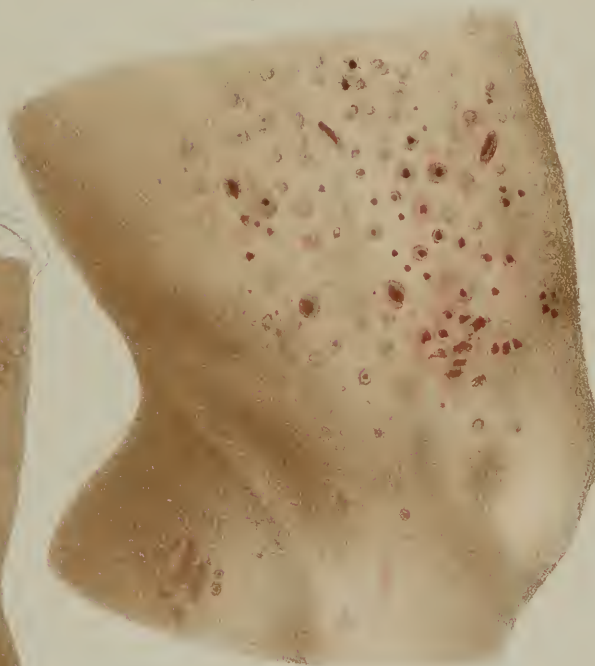
4. Lichen lividus.



8. Prurigo mitis.

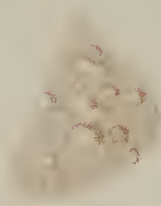
9. Prurigo formicans).

5. Strophulus.



6. Strophulus candidus.

7. Strophulus albidus.



10. Pediculus capitis.

11. P. corporis.

12. P. pubis



## P A P U L Æ.

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### P L A T E   X I X.

*Fig. 1.*—*Lichen urticatus* on the bend of the arm.

*Fig. 2.*—*Lichen circumscriptus* in a chronic form, groups of papulæ bounded by a sort of ring.

*Fig. 3.*—*Lichenous* eruption on the leg of an old woman labouring under a hemorrhagic fever, accompanied by an ecchymosis under the skin.

*Fig. 4.*—*Lichen lividus*.

### S T R O P H U L U S.

*Fig. 5.*—*Strophulus* in very active condition ; it is usually more mild.

*Fig. 6.*—*Strophulus candidus*.

*Fig. 7.*—Small papulæ of *strophulus albidus*.

### P R U R I G O.

*Fig. 8.*—*Prurigo mitis*. Scattered papulæ and minute black scabs.

*Fig. 9.*—*Prurigo formicans*. Small crusts, dry and bloody, numerous and scattered.

*Fig. 10.*—*Pediculus capitis* magnified.

*Fig. 11.*—*Pediculus corporis* do.

*Fig. 12.*—*Pediculus pubis* do.



## S Q U A M Æ .

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THE scaly diseases are recognized by scales or plates of altered cuticle, dry, of a dead-white colour, which are rapidly reproduced. The subjacent skin is always more or less inflamed. The Squamæ are preceded by red spots or papular elevations surmounted by a minute scale.

They comprise PSORIASIS, LEPRO, PITYRIASIS and SCALY SYPHILIS.

## P L A T E X X .

### P S O R I A S I S .

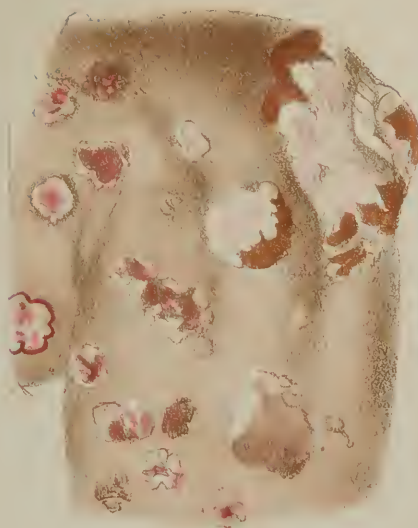
- Fig. 1.*—Part of the skin of the fore-arm of an individual affected with *acute psoriasis*. Single points and confluent patches.  
*Fig. 2.*—*Psoriasis guttata*. A chronic eruption of scaly papulæ without redness at the base, several patches as white as chalk.  
*Fig. 3.*—*Psoriasis inveterata*. Large and old plates divided by fissures and irritated by the friction of the clothes.  
*Fig. 4.*—*Psoriasis annulata et imbricata*. This form of eruption is rare.  
*Fig. 5.*—*Psoriasis gyrata* from Willan.  
*Fig. 6.*—Confluent *psoriasis* of the scalp.  
*Fig. 7.*—Skin of the elbow in an acute case of *psoriasis*.  
*Figs. 8 and 9.*—Two varieties of *acute psoriasis*, one white and the other red.



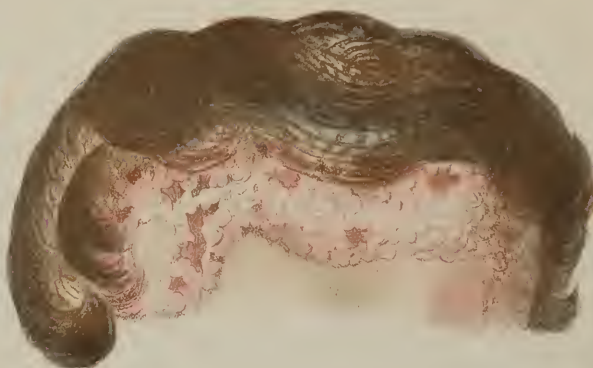
1. Psoriasis acuta.



2. Psoriasis guttata.



6. Confluent Psoriasis.



7. Coherent plates



4. Psoriasis annulata  
et imbricata



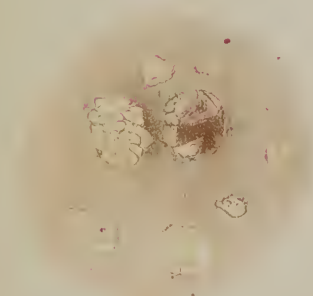
3. Psoriasis inveterata.



5. Psoriasis  
gyrata.

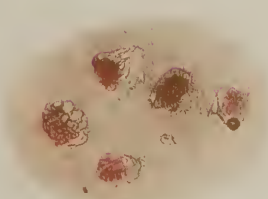


8.



Psoriasis.

9.



Red variety

White variety

On Stone by A. Newsam

Philadelphia, Published by Carey & Hart

P. S. Duval. Lith. Phil.











1. Psoriasis palmaris.



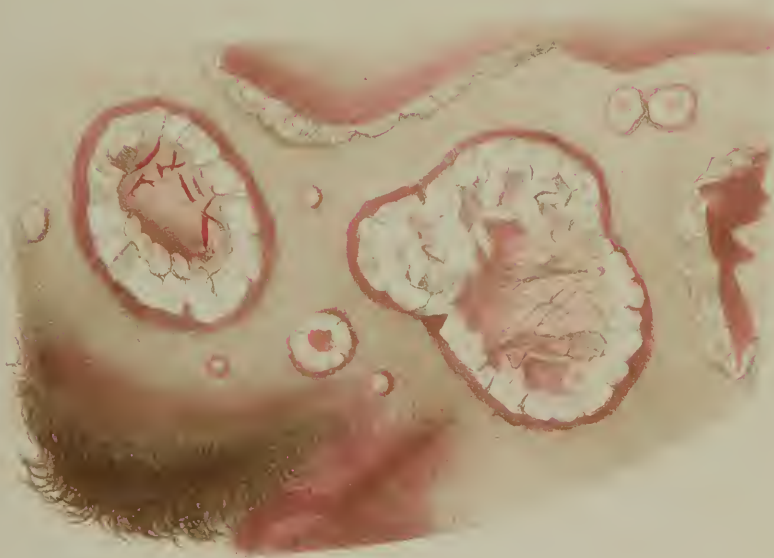
3. Psoriasis leprosa.



2. Psoriasis palmaris centrifuga



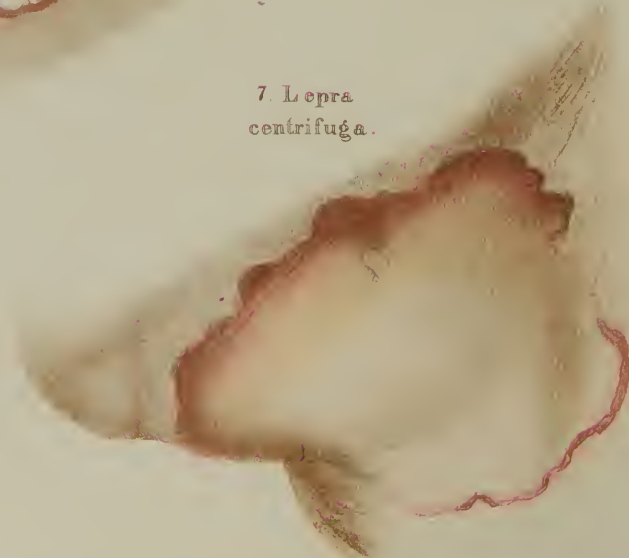
4. Lepra vulgaris.



5. Lepra capilliti.



7. Lepra centrifuga.



6. Lepra nigricans





## S Q U A M Æ .

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### P L A T E X X I .

- Fig. 1.*—*Psoriasis palmaris*. Papular elevations, scales, and irregular desquamation of the palm of the hand.  
*Fig. 2.*—A very remarkable case of *palmar psoriasis* in which the desquamation proceeds regularly and in a circle.  
*Fig. 3.*—*Psoriasis leprosa*. A variety which approaches *lepra*.

### L E P R A .

- Fig. 4.*—*Lepra vulgaris*. Leprous plates in progress of cure on the belly of an adult.  
*Fig. 5.*—Peculiar appearance of *lepra* on the scalp.  
*Fig. 6.*—*Lepra nigricans*, Willan. A ring of *lepra* with a thick black scale in the centre.  
*Fig. 7.*—A variety of *lepra* very difficult to distinguish from *lichen circumscriptus*, it differs in the absence of pruritus, and the leprous arc has no appearance of papulæ.



# S Q U A M Æ.

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## P L A T E X X I I.

### P I T Y R I A S I S.

*Fig. 1.*—Desquamation of the cuticle of the neck and head from *pityriasis*, resembling *asbestos*.

*Fig. 2.*—*Pityriasis furfuracea*. Smaller scales and separate.

*Fig. 3.*—*Pityriasis rubra*. Desquamation foliated, rendered yellow in spots by the exudation of a thin serous fluid; scales dead white.

*Fig. 4.*—*Pityriasis* affecting the lips.

*Fig. 5.*—*Pityriasis* as it appears on the sole of the foot, cuticle yellow and rose-coloured in patches.

*Fig. 6.*—Appearance of the nails in a case of general *psoriasis*. (See Pl. XXI.)

### P E L L A G R A.

*Fig. 7.*—Appearance of *Pellagra*. (From *Alibert*.)



1. Pityriasis desquamans.



6. Onyxis squamosa.



5. Pityriasis plantaris.



2. Pityriasis furfuracea



4. Pityriasis labialis.



7. Pellagra



3. Pityriasis rubra













LUPUS.

1. Lupus exedens



4. Lupus non exedens.



5. Lupus non exedens  
serpiginosus.

2.

Lupus  
exedens



(granulations)

3.



(scales)



6. L. non exedens (Tubercle)



7. L. non exedens (cicatatrix)





# T U B E R C U L Æ.

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TUBERCLES are solid elevations, developed in the thickness of the skin, of which the size varies from that of a small bean to an olive and which almost always terminate in suppuration or ulceration.

The Tuberculæ are six in number, viz:—LUPUS, SCROFULA ELEPHANTIASIS, FRAMBÆSIA, CANCER and SYPHILITIC TUBERCLES.

## P L A T E   X X I I I.

### L U P U S.

*Fig. 1.—Lupus exedens.* Brown scabs strongly adherent, slight desquamation at the edges and oval, violet, tubercles.

*Fig. 2.—Lupus exedens.* Ulcerations.

*Fig. 3.—Lupus exedens.* Partial destruction of the end of the nose and scaly appearance of the rest of the organ.

*Fig. 4.—Lupus non-exedens.* Patches of small tubercles of a yellowish red, covered with scales.

*Fig. 5.—Lupus serpiginosus.* Presenting a singular appearance, as if covered by a sleeve.

*Fig. 6.—Lupus non-exedens.* A subcutaneous tubercle.

*Fig. 7.—*A portion of the skin of the thigh covered by small tubercles and resembling a cicatrix.



# TUBERCULÆ.

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## PLATE XXIV.

- Fig. 1.*—*Lupus non-exedens.* Developed on the scalp.  
*Fig. 2.*—*Lupus vorax.* (From *Alibert.*)  
*Fig. 3.*—*Scrofula.* Cutaneous ulcerations, scaly crusts, and scattered cicatrices.  
*Fig. 4.*—Section of a scrofulous tubercle.  
*Fig. 5.*—Scrofulous ulcer, following inflammation of a gland.  
*Fig. 6.*—Scrofulous inflammation of the root of the nail with a fistulous opening.  
*Fig. 7.*—Scrofulous ulcer. (From *Lugol.*)

## ELEPHANTIASIS.

- Fig. 8.*—*Elephantiasis.* Cutaneous and subcutaneous tubercles, some blotches and a few ulcers on the face of an adult.



1. Lupus non sedens.  
(Alopecia)



2. Lupus vorax.



6. Scrofula (onyxis.)



3. Scrofula  
(Cutaneous tubercles)



4. Section of a tubercle



7. Scrofula (vegetations.)



5. Scrofula (ulcer.)



8. Elephantiasis. (Ulcerations)













1. Elephantiasis  
*Large tubercles*



2. Elephantiasis  
*Hypertrophied Ear*



6. Elephantiasis  
*of the Arms*



5. Elephantiasis  
*of the Scrotum*



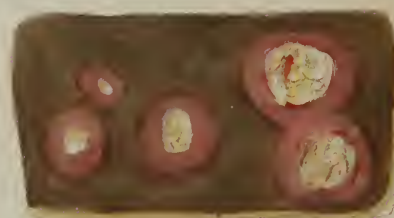
3. Elephantiasis, Ulcerations  
*of the Epiglottis.*



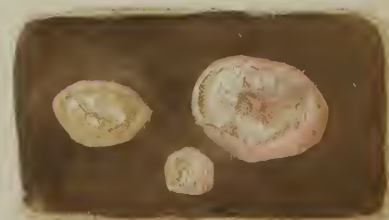
4. Elephantiasis  
*Palatine tubercles*



7. Framboesia (Yaws)  
*Red tubercles*



8. Framboesia  
*white tubercles*





# TUBERCULÆ.

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## PLATE XXV.

*Fig. 1.*—A rare variety of *Elephantiasis* (From *Adams*.)

*Fig. 2.*—*Elephantiasis* affecting the ear.

*Fig. 3.*—Epiglottic ulcers in an *Elephantiac* subject.

*Fig. 4.*—Tubercles, some of which are ulcerated on the palate.

*Fig. 5.*—*Elephantiasis* of the scrotum. (From *Delpech*.)

*Fig. 6.*—*Elephantiasis* of the Arabs.

## FRAMBÆSIA, OR THE YAWS.

*Fig. 7.*—*Frambæsia*. Red elevations, scabs and fungous ulcers. (From *J. Thompson*.)

*Fig. 8.*—*Frambæsia*. Fungous whitish ulcers. (From *Gomes*.)



# TUBERCULÆ.

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## PLATE XXVI.

### CANCEROUS AFFECTIONS OF THE SKIN.

- Fig. 1.*—*Mollusciform cancer.* Tumours of the same colour as the skin, covered with convoluted fissures, in a woman who had a cancer of the breast.
- Fig. 2.*—A section of the above, showing the amount of the elevation.
- Fig. 3.*—*White cancer.* Small tumours of a milky white on the skin of the abdomen.
- Fig. 4.*—A subcutaneous tumour, rounded and red.
- Fig. 5.*—*Subcutaneous cancer.* A mass of cerebriform matter, divided into several lobes, their surface covered with small veins.
- Fig. 6.*—*Subcutaneous cancerous tubercles.*
- Fig. 7.*—*Mulberry cancer* from the cheek near the upper lip.
- Fig. 8.*—*Cancer of the penis.* (From *Wadd.*)
- Fig. 9.*—*Fungous cancer* in the ham of a woman.
- Fig. 10.*—*Melanoid cancer.* A tubercle of an irregular form and a dark colour.
- Fig. 11 and 12.*—*Bleeding tumour,* in the centre of which clots of blood are found.



1. Mollusciform Cancer.



2. Section of Fig. 1

8. Fungous Cancer



3. Cancer (white variety.)



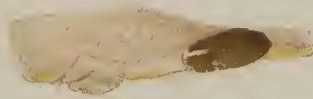
7. Mulberry Cancer.



9. Pediculated Fungous Cancer.



6. Pisiiform Cancer.



4. Globular sub-cutaneous Cancer.



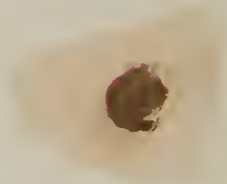
5. Varicose sub-cutaneous Cancer.



10. Melanoid Cancer.



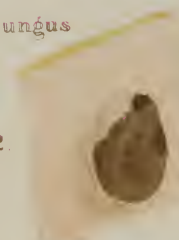
11



Fungus

Hæmatodes

12













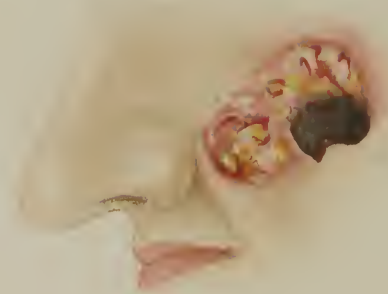
1. Cancerous tubercle  
ulcerated



2. Cancer of the  
larynx



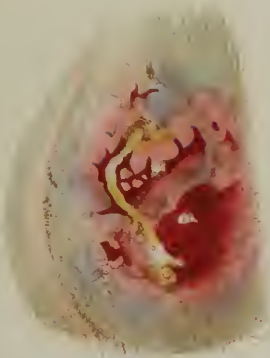
3. Cancer  
(eating ulcer)



7. Melanotic mass  
in the skin

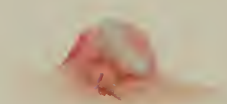
8. Melanosis

4. Cancerous ulcer



(muscle)

11. Melanotic Mass



10. Melanosis  
in a mass

9. Cancerous melanosis  
of the lung



6. Melanosis





# T U B E R C U L Æ.

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## P L A T E X X V I I.

- Fig. 1.*—An ulcerated cancerous tumour situated in the corner of the eye.  
*Fig. 2.*—Small cancerous tumours in the scalp, causing the fall of the hair.  
*Fig. 3.*—Corroding ulcer of the face; dilated veins at the base which is indurated.  
*Fig. 4.*—Cancerous ulcer of the scrotum; the glands of the groin carcinomatous.  
*Fig. 5.*—Small *melanotic* mass on the forehead.  
*Fig. 6.*—A *melanotic* eruption in the form of grains, in an old woman.  
*Fig. 7.*—A *melanotic* mass in the *rectus* muscle of the thigh.  
*Fig. 8.*—A mixture of *cancer* and melanosis found in the lung.  
*Fig. 9.*—*Melanotic* tumour developed on the sole of the foot; it has the colour of a truffle covered with whitish plates.  
*Fig. 10.*—*Melanosis* in an ovary.



# T U B E R C U L Æ.

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## P L A T E X X V I I I.

*Fig. 1.*—Sections of the tumour in the sole of the foot. (*Fig. 9*, Pl. XXVII.)

*Fig. 2.*—*Melanotic* and cerebriform tumours in the liver.

*Fig. 3.*—*Melanotic* masses in the skin.

*Fig. 4.*—A *melanotic* mass from the substance of the heart.

*Fig. 5.*—A *keloid* tumour developed on the cicatrix of a burn.

*Fig. 6.*—Hypertrophy of the skin of the abdomen.

*Fig. 7.*—A section of do. showing the thickness.

*Fig. 8.*—Sarcomatous tumour on the nose, cutaneous veins much expanded.

*Fig. 9.*—A verrucous or warty tumour, developed in the larynx.

*Fig. 10.*—Mollusciform tumour, developed on the shoulder.

*Fig. 11.*—A remarkable piliferous nævus. (From *Waller*.)



1. Melanosis  
(Sections)



2. Melanosis  
of the LIVER



3. Melanosis  
of the skin



4. Melanosis  
of the heart.



5. Keloid



6. Hypertrophy  
of the skin.



7. (Section of fig 6)



8. Hypertrophy  
of the nose.



9. Vegetations  
in the Larynx



10. Mollusciform TUMORS



11. Filiferous Masses













1. Contused Chancere



2. Hunterian Chancre.



3. Superficial ulcer.



4. Fungous ulcer



5. Fungous ulcers



6. Phagedenic ulcer



7. Phagedenic ulcer.



8. Ulcers of the Prepuce



9. Ulcers with elevated edges



10. Balanitis



11. Corroding ulcer.



12. Corroding ulcer



13. Gangrenous ulcer



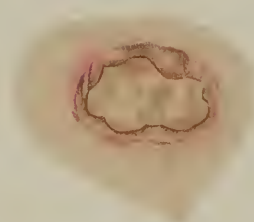
14. Phagedenic ulcer



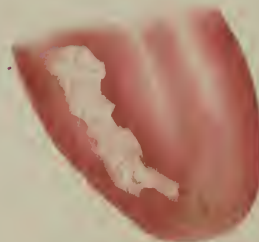
15. Ulcer of the Gums.



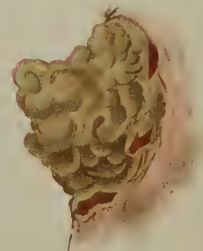
16. Ulcer.



17. Grey ulceration.



18. Scabby ulcer.





# SYPHILIS.

THE appearances presented by primary syphilis are very various. They are BLENNORRHAGIA, BALANITIS, and COMMON, INDURATED, PHAGEDENIC, and GANGRENOUS CHANCER. All these symptoms are produced by a *morbid virus*, capable of being inoculated, and when inoculated, of being followed by general or secondary syphilitic diseases.

These secondary affections comprise many affections of the skin, and may be made to include, VEGETATIONS, ONYXIS and ALOPECIA.

## PLATE XXIX.

*Fig. 1.*—Ordinary chancre on the *corona-glandis*, yellow at the bottom, but no induration.

*Fig. 2.*—A *Hunterian chancre* with indurated base.

*Fig. 3.*—Superficial primary sores.

*Fig. 4.*—A fungous primitive sore on the skin of the prepuce.

*Fig. 5.*—Fungous ulcers inside of the prepuce.

*Fig. 6.*—*Phagedenic* ulcer of the glans.

*Fig. 7.*—Do. of the skin of the penis.

*Fig. 8.*—Superficial primary sores.

*Fig. 9.*—Primary sores with elevated margins.

*Fig. 10.*—*Balanitis*, or inflammation of the glans.

*Fig. 11.*—A *corroding* syphilitic ulcer on the soft palate.

*Fig. 12.*—A *corroding* ulcer at the angle of the mouth.

*Fig. 13.*—Destruction of the nose by a syphilitic sore.

*Fig. 14.*—A *sloughing* or *gangrenous* ulcer of the penis.

*Fig. 15.*—A rare variety of ulcer of the gums.

*Fig. 16.*—Simple consecutive ulcer.

*Fig. 17.*—Consecutive ulcer on the tongue.

*Fig. 18.*—A scabby ulcer of the cheek.



# SYPHILIS.

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## PLATE XXX.

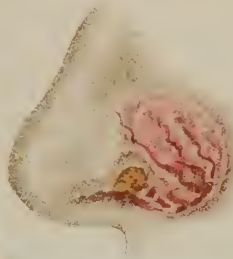
- Fig. 1.*—A face almost destroyed by a *serpiginous phagedenic syphilitic ulcer*; it has cicatrized on the chin and is covered in other parts by scabs of a dark colour.
- Fig. 2.*—A curious *excentric serpiginous ulcer* which extends over nearly half the trunk.
- Fig. 3.*—A remarkable form of *serpiginous ulcer* caused by a collection of ulcers in the form of the letter C.
- Fig. 4.*—*Ulcers* and *cicatrices* on the palate.
- Fig. 5.*—A *serpiginous ulcer* cicatrized at one end.
- Fig. 6.*—A curious ulcer filled with fissures on the ala of the nose of a syphilitic patient.



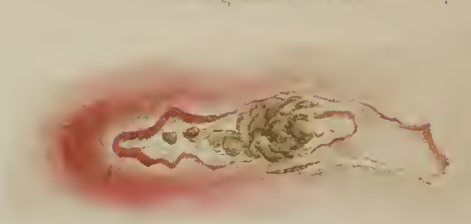
1. Serpiginous ulcer  
(phagedenic)



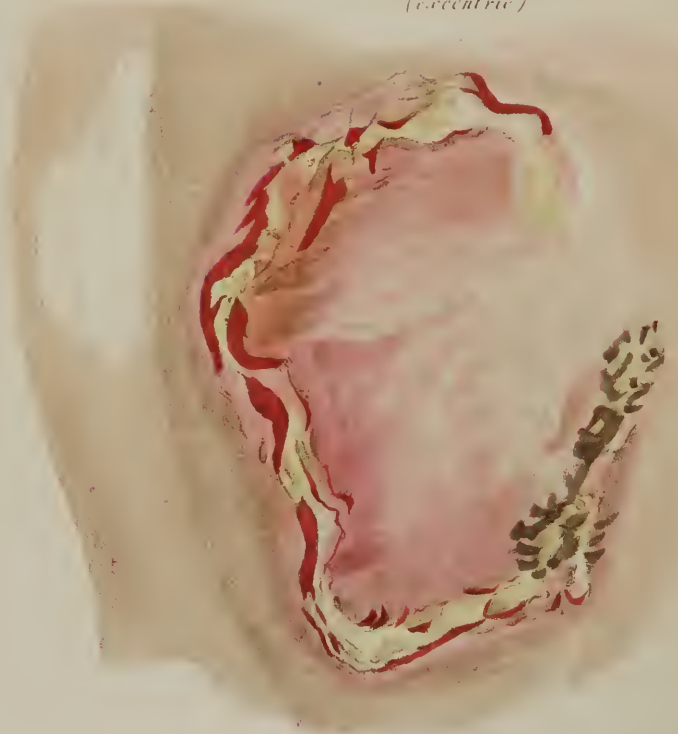
6. Vermicular ulcer



5. Serpiginous ulcer



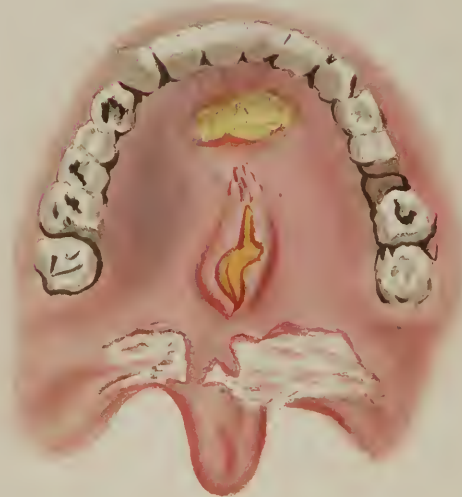
2. Serpiginous ulcer  
(circular)



3. Serpiginous ulcers  
in art.



4. Cicatrices & ulcers













Syphilitic Exanthemes

1. Violet



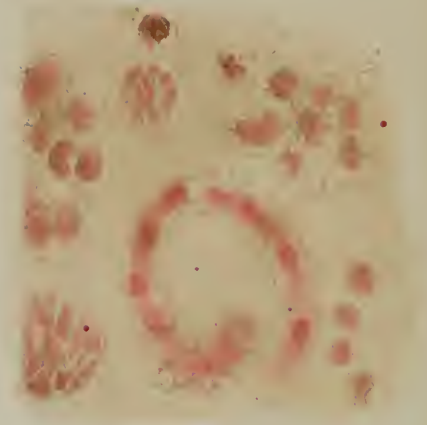
2. Red



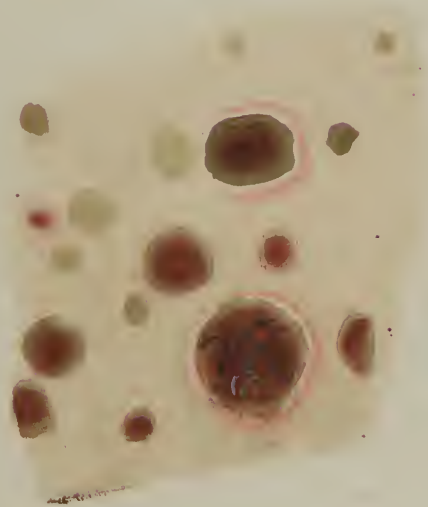
3. Yellow



4. Scaly eruption.



5. Large scaly blotches.



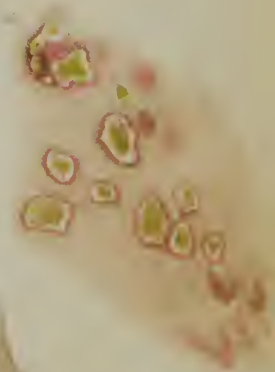
7. Scaly eruption & fissures



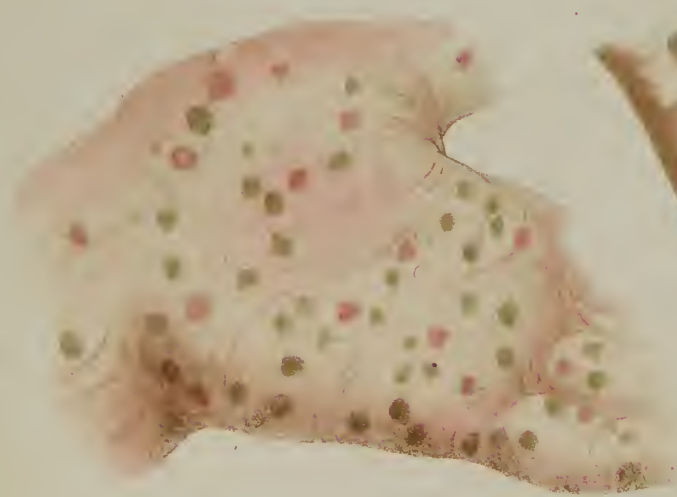
6. Scaly Maculae



10. Scabby blotches.



8. Discrete blotches.



9. Confluent blotches.





# SYPHILIS.

## PLATE XXXI.

Fig. 1. }  
" 2. } *Syphilitic blotches* { of a violet tint.  
" 3. } { of a red or coppery tint.  
          { of a yellow tint.

Fig. 4.—*Scaly plates* of a violet tint, formed by the aggregation of several blotches.

Fig. 5.—Large *scaly blotches* of a violet red and a deeper colour in the centre.

Fig. 6.—*Yellow blotches* of a uniform tint of colour.

Fig. 7.—A *yellowish scaly band* filled with fissures.

Fig. 8.—*Lenticular copper-coloured blotches* scattered over the palm of the hand.

Fig. 9.—*Confluent blotches* on the sole of the foot detaching the cuticle.

Fig. 10.—*Blotches* with a scab in the centre.



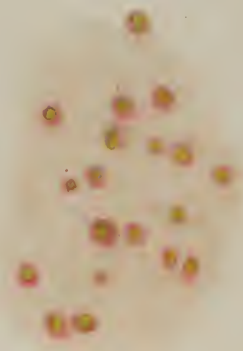
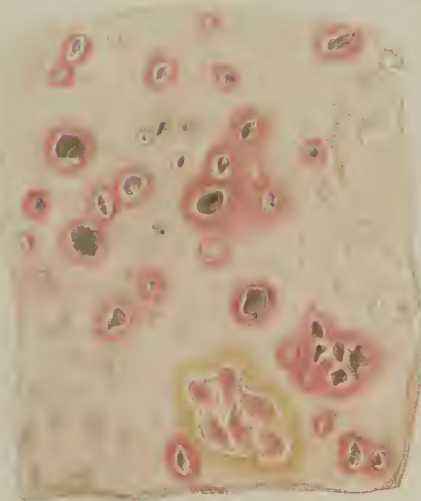
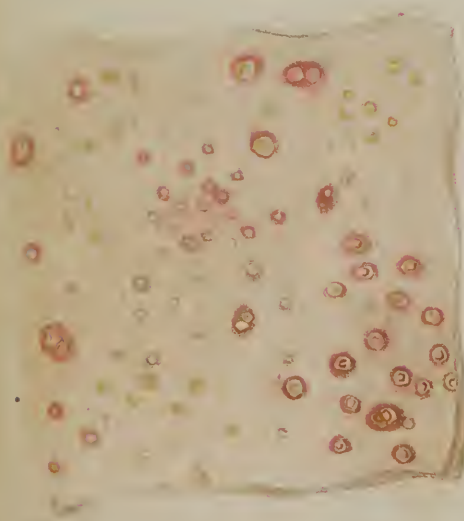
# SYPHILIS.

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## PLATE XXXII.

- Fig. 1.*—Small yellowish syphilitic papulæ on the back.  
*Fig. 2.*—Small groups of yellowish-brown papulæ.  
*Fig. 3.*—Large papulæ looking almost like tubercles.  
*Fig. 4.*—Syphilitic lichen circumscriptus.  
*Fig. 5.*—Papulæ and yellowish tubercles on the breast.  
*Fig. 6.*—A papulous arc surrounding a cicatrix.  
*Fig. 7.*—A portion of the skin of the shoulder exhibiting groups of papulæ.  
*Fig. 8.*—An eruption of vesicles on the back of the forearm of a man affected with syphilis.  
*Fig. 9.*—Ordinary appearance of a syphilitic psyrdraceous eruption.  
*Fig. 10.*—Phlyzaceous pustular syphilis.  
*Fig. 11.*—Large conoidal pustules on the breast and face.















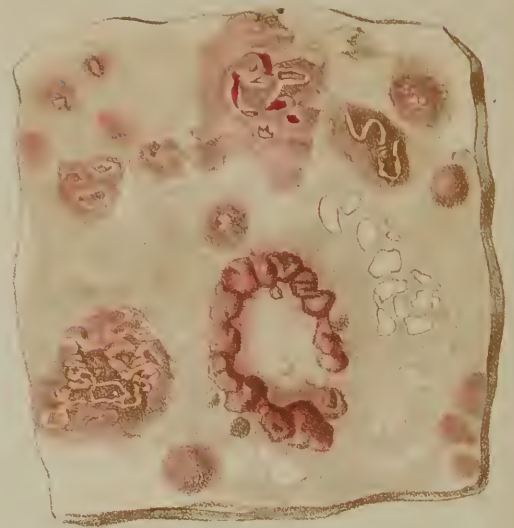
1. Tubercles in groups



2. Large tubercles.



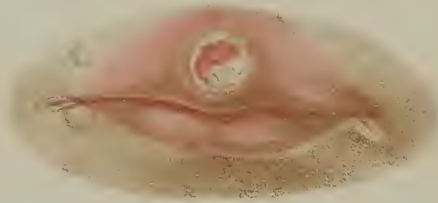
3. Tubercles in rings



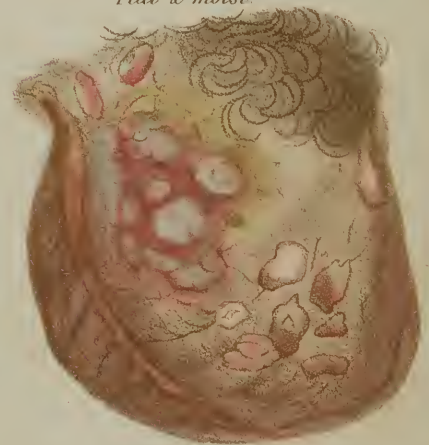
4. Flattened tubercles.



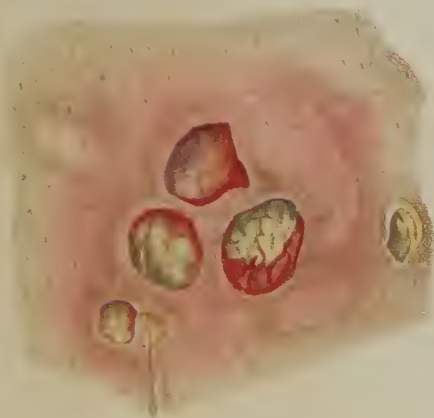
5. Tubercles  
*flat & scaly*



6. Tubercles  
*flat & moist*



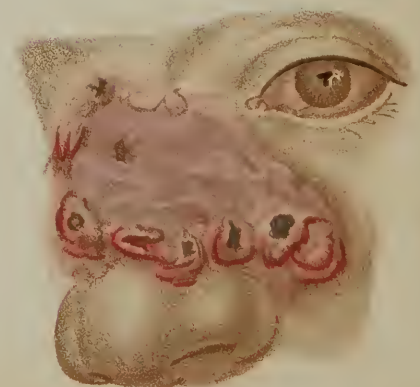
7. Sub-cutaneous tubercles.



8. Ulcerated tubercles.



9. Tubercles in arcs.





# SYPHILIS.

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## PLATE XXXIII.

*Fig. 1.*—A group of *agglomerated tubercles*, of a copper-red colour, near the ala of the nose.

*Fig. 2.*—Large projecting *tubercles* on the skin of the thigh.

*Fig. 3.*—A part of the skin of the back showing *chaplets of tubercles*.

*Fig. 4.*—*Flattened tubercles* presenting fissures in the direction of the folds of the anus.

*Fig. 5.*—*Tubercles* above and at the corners of the mouth.

*Fig. 6.*—*Flat moist tubercles* on the scrotum; the upper part of the raphe is swelled and hardened.

*Fig. 7.*—*Tubercles* on the thigh without any change in the colour of the skin.

*Fig. 8.*—*Ulcerated tubercles* on the nipple of an infected nurse.

*Fig. 9.*—An *arc of ulcerated tubercles* on the nose of a syphilitic patient.



# SYPHILIS.



## PLATE XXXIV.

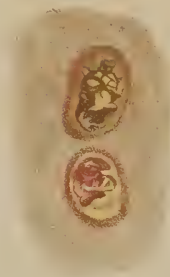
- Fig. 1.*—An eruption of *flat tubercles* on the thighs and genitals.  
*Fig. 2.*—*Tubercles* on the back of the neck.  
*Fig. 3.*—Groups of little ulcers with subcutaneous indurations.  
*Fig. 4.*—Small masses of *vegetations*, traversed by hairs, cut from the verge of the anus.  
*Fig. 5.*—Same *vegetations* seen in section.  
*Fig. 6.*—*Flat scaly tubercles* in the axilla.  
*Fig. 7.*—Red indolent *tubercles* accompanying syphilitic ozæna.  
*Fig. 8.*—*Vegetating tubercles* on the thighs and vulva.  
*Fig. 9.*—An *arc of tubercles* surmounted by triangular ulcerations.



1. Blackish tubercles



2. Tubercles  
*Fig. 1. ulcerated*



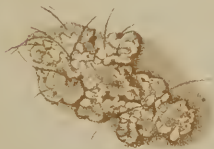
3. Ulcerated tubercles.



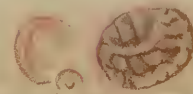
8. Vegetating tubercles.



4. Vegetations.



6. Scaly tubercles.



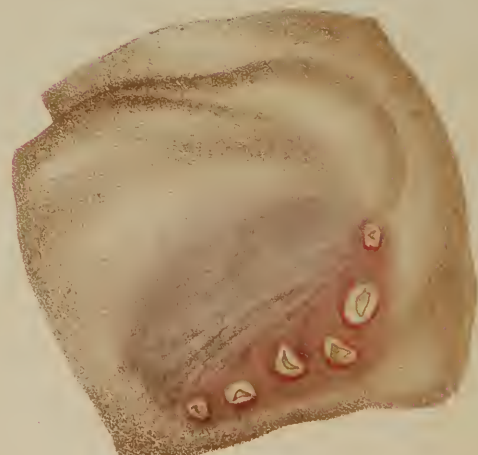
7. Indolent tubercles.



5. Vegetations.



9. Small ulcerated tubercles.









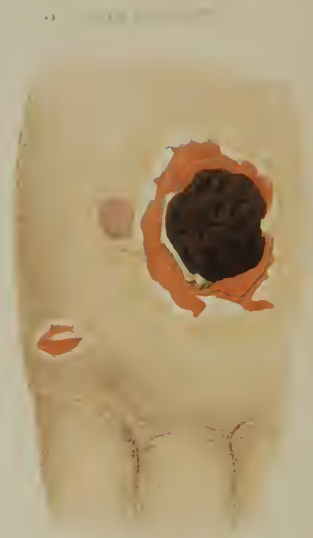




1. Bullae.



2. Syphilis bullae.



3. Primaries.



6. Vegetations.



5. Vegetations in the larynx.



8. Ovary.



7. Vegetations.



9. Tumor.



12. Alopecia.



11. Condylar pustules.



10. Tumor.





# SYPHILIS.

---

## PLATE XXXV.

- Fig. 1.*—A *bullar syphilitic eruption* on the back of the forearm.  
*Fig. 2.*—A similar eruption on the palm of the hand.  
*Fig. 3.*—A large *bullula* ulcerated and covered by a black adherent crust in the palm of the hand.  
*Fig. 4.*—Upper lip elevated to show a deep ulcerated fissure, and a small grayish tubercle.  
*Fig. 5.*—Obstruction of the larynx by a voluminous vegetation.  
*Fig. 6.*—Vegetations on the *corona glandis*.  
*Fig. 7.*—Vegetation in the form of a horn on the *corona glandis*.  
*Fig. 8.*—*Syphilitic onyxia* on two of the toes and a grayish tubercle in their commissure.  
*Fig. 9.*—Section of a tumour from the forehead of a syphilitic patient.  
*Fig. 10.*—A large *tubercle* or tumour on the cheek.  
*Fig. 11.*—*Confluent syphilitic pustules* on the end of the nose.  
*Fig. 12.*—*Syphilitic alopecia*.



# SYPHILIS.

---

## PLATE XXXVI.

*Fig. 1.*—*Reddish-brown blotches* on a new-born child affected with *gonorrhœal ophthalmia*.

*Fig. 2.*—An eruption of tubercles on the thighs of a new-born child.

## VASCULAR ALTERATIONS.

These are produced by the morbid alterations of the capillaries of the skin, and are characterized by permanent red spots, without morbid heat, and disappear for the moment under the pressure of the finger. They are divided into CUTANEOUS and SUBCUTANEOUS.

*Fig. 3.*—A *varicose tumour* on the thumb.

*Fig. 4.*—A small *vascular nævus* commonly called a strawberry.

*Fig. 5.*—Small *vascular papular vegetations*, around the mouth and on the nose.

*Fig. 6.*—Small *petechiæ*, scattered over the face of a child of 12 years affected with *purpura*.



1. Congenital Syphilis.



2. Congenital Syphilis.



3. Varicose tumor.



4. Varicose tumor.



5. Vascular regurgitation.



6. Purpura petechialis.













6. Vascular nævus.



4. Ecchymosis  
(intestinal)



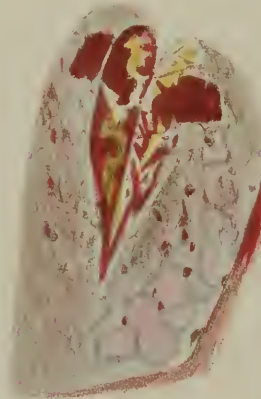
1. Purpura urticans.



7. Spotted vascular  
nævus.



5. Ecchymosis  
(pulmonary)



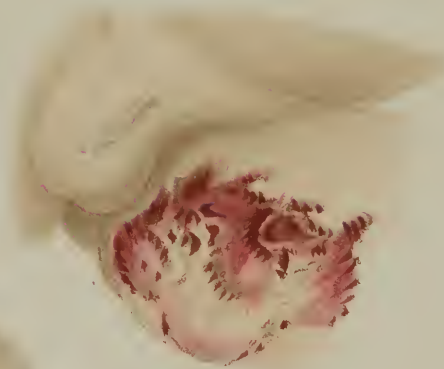
3. Purpura.



2. Purpura & Rupia.



8. Ulcerated vascular nævus.



9. Vascular nævus.





# VASCULAR ALTERATIONS.

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## PLATE XXXVII.

- Fig. 1.—*Purpura urticans*; an eruption of rose-red, itching, lenticular spots, slightly prominent, disappearing partially under pressure, mixed with yellowish or brownish blotches, which bear pressure without altering.
- Fig. 2.—The lower part of the leg of an adult covered with *purpura* and *rupia* mingled.
- Fig. 3.—*Purpura*; large ecchymoses, such as are produced by a blow.
- Fig. 4.—A small portion of intestine presenting *ecchymoses*.
- Fig. 5.—A portion of the right lung, presenting *sub-pleural petechiæ* and an ecchymosis in the substance of the lung.
- Fig. 6.—A congenital *vascular* tumour. (*Nævus*.)
- Fig. 8.—A *vascular nævus* which has taken on the ulcerative process.
- Fig. 9.—A portion of a *vascular nævus* which has no distinct *arborizations*.



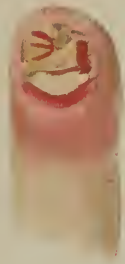
# DISEASES OF THE CORNEOUS TISSUES.

## PLATE XXXVIII.

- Fig. 1.—*Onychia* of the root of the nail consequent upon a bruise.  
Fig. 2.—*Lateral onyxis*, or the nail growing into the flesh.  
Fig. 3.—A deformed, blackened nail, following onyxis.  
Fig. 4.—Deformed nail, following a chronic onyxis.  
Fig. 5.—A wart under the nail elevating the edge.  
Fig. 6.—Alteration of the nails in *plica-polonica*.  
Fig. 7.—A horn developed on a large wart in an old woman.  
Fig. 8.—A horn on the scrotum.  
Fig. 9.—Toe-nail altered and elongated.  
Fig. 10.—A hand totally deformed by horny excrescences.  
Fig. 11.—Spots of *lentigo* or *nævus pilaris*.  
Fig. 12.—*Warty vegetations* on the wrist.  
Fig. 13.—*Warts* on the finger.  
Fig. 14.—*Hordeolum* or styne, followed by a wart.  
Fig. 15.—Excessive development of the papillæ of the skin.  
Fig. 16.—Do. of the tongue.



1. Onyxis  
of the root of the nail.



2. Lateral  
Onyxis.



3. Chronic  
Onyxis



4. Chronic  
Onyxis



5. Deformity  
of the nail.



6. Trichomatous  
Onyxis



7. Horn.



8. Horn  
from the Scutum.



9. Nail  
in the form of a horn



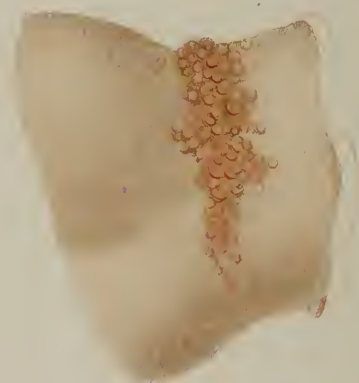
10. Horny transformation  
of the hand.



11. Lentigo.



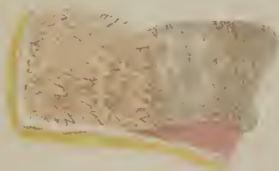
12. Warty Vegetations.



16.

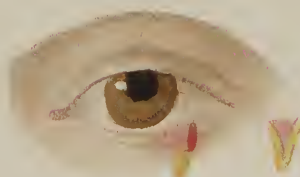


15 & 16. Hypertrophy  
of the Papillæ



( of the skin )

14. Hordeolum.



13. Warts



( of the tongue )











1. Corn



2. Corn.



3. Corn.



4. Corn  
(Section)



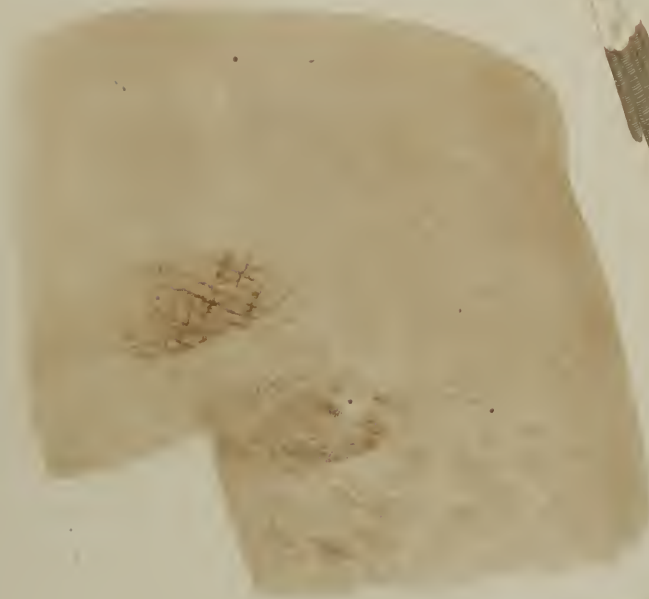
7. Corneous Ichthyosis.



6. Ichthyosis.



5. Simple Ichthyosis.



9. Chloasma.



8. Alopecia.



10. Trichoma  
(plica polonica)



11.





# ALTERATIONS OF THE EPIDERMIS, &c.

---

## PLATE XXXIX.

- Fig. 1.*—*Corn* on the little toe.  
*Fig. 2.*—*Corn* which had been a long time freed from pressure.  
*Fig. 3.*—Internal face of *fig. 2.*  
*Fig. 4.*—Section of a *corn*.  
*Fig. 5.*—*Simple ichthyosis* on the elbow.  
*Fig. 6.*—Bend of the knee covered with *brown mosaic* plates of *ichthyosis*.  
*Fig. 7.*—Appearance of the thumb of one of the brothers by the name of *Lambert*, who were called *porcupines*, accompanied by two magnified views of the spines.  
*Fig. 8.*—Dead white spots deprived of their hair. (*Alopecia*.)  
*Fig. 9.*—Spots of *chloasma*, some small, others large and irregular.  
*Fig. 10.*—*Plica-polonica*, or *trichoma*. (From *Lafontaine*.)  
*Fig. 11.*—*Chloasma* in the form of little blotches.



# ALTERATIONS OF THE PIGMENT.

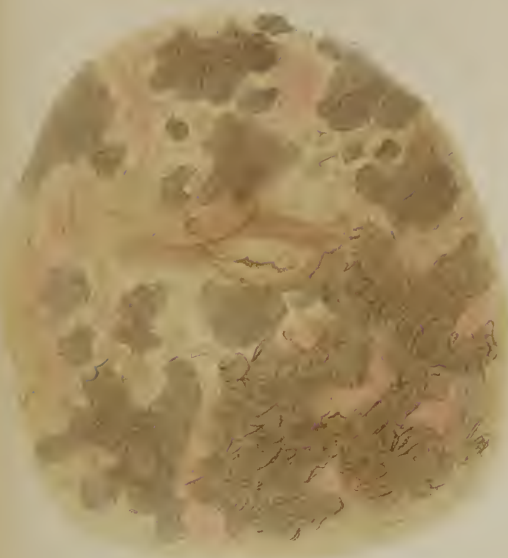
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## PLATE XL.

- Fig. 1.*—Dark discoloration of the skin, which followed articular rheumatism. (*Melasma*.)  
*Fig. 2.*—*Melasma* in an individual affected with *pellagra*.  
*Fig. 3.*—Same affection on the hand.  
*Fig. 4.*—Small white blotches on the upper eyelid. (*Canities*.)  
*Fig. 5.*—An old woman with bunches of white hair growing on the face.  
*Fig. 6.*—*Albinism* in a negro.  
*Fig. 7.*—Partial *albinism*; congenital.  
*Fig. 8.*—Partial *leucopathia* or *albinism*.  
*Fig. 9.*—*Nigrities*; a part of the shoulder, which became as dark as that of a mulatto.  
*Fig. 10.*—Tint of the skin produced by the internal use of nitrate of silver.  
*Fig. 11.*—Black spots on the tongue.  
*Fig. 12.*—Yellow spots symmetrically disposed on the eyelids.



1. Melasma.



2. Pellagrous melasma.



3. Pellagrous melasma.



6. Albinism.



5. Canities.



4. Canities.



(a bearded woman.)

7. Partial Albinism



8. Leucopathia.



9. Nigritia.



10. Purple tint  
from Atrial of Silver.



11. Spot on the tongue.



12. Yellow spots on the eyelids.









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